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THE MEDICAL JOURNAL OF AUSTRALIA

VOL. I.—14TH YEAR. SYDNEY: SATURDAY, MAY 14, 1927. No. 20.

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THE DIFFICULT CHILD.[1]

By JOHN BOSTOCK, M.B., B.S. (Lond.), D.P.M.,
Medical Superintendent, The Mental Hospital, Newcastle; Honorary Physician in Charge of the Neurological and Psychiatric Clinic, The General Hospital, Newcastle, New South Wales.

BECAUSE the nervous origin of many troubles in childhood is not recognized, each child presenting difficulty should be approached with eye open for possible abnormality in nerve or mind function. A reason is thereby suggested for this paper and if another reason is needed, it will be found in the fact that few realize how large are the percentages of mental, physical and social misfits recruited from the ranks of our problem children.

In the whirl of mind and body activity occurring in infancy and youth there must inevitably be more scope for faulty fabric than in the comparative calm of mature life. A study of this period of prodigious growth will therefore be opportune.

The process of growing up may be likened to the making of a snowball; only instead of snow the baby as it rolls through life, gathers sensations, reflexes, habits, perceptions, ideas until at the age of twenty-one it is accredited with the cognomen "man" or "woman" as the case may be. But unfortunately, whereas snow once acquired remains in the same relative position until dissolution occurs, human personality shows many changing patterns. The mind is in a constant flux.

A child cannot be treated as a pillar box into which letters of ill directed advice and correction can be posted with certainty of delivery, the address is constantly altering. What is folly at twelve, is wisdom at the age of five.

Character Formation.

An understanding of changes in the child mind depends on the ability of the adult to attune his vision to the child viewpoint. Emotion of the primitive type is present in the baby and consists of a vacillation between tears and smiles. There are numerous factors conveniently classed as instinctive; hunger being the most obvious. Affront the infant with a terrifying object, fear will result. He admires his own toes and person, thus demonstrating a budding instinct of self-regarding. When neglected, he rapidly undertakes a series of activities to attract your attention.

Cabot in her delightful book, the "Seven Ages of Childhood," divides the child life into seven stages. The age of infancy lasts until the third year, as during it the groundworks of hearing, seeing, comparison, memory, language, play and ethics are laid; its importance is enormous.

If a baby is rightly fed, rightly dressed and left alone, he is usually "good." It is the mother, not the baby, who has to learn moral control . . . not to pick him up; not to point out all the kingdoms of the world at once to his blinking eyes; not to lure him to show off his accomplishments to every admiring stranger; above all, not to submit to his tyranny. Every enterprising baby will experiment in the fine art of tyranny. If he finds that when he cries at being left alone someone will pick him up, he yells all the louder. If he gets what he wants by begging he will become a professional beggar.

She might have added, a common scold, or a devotée of the dummy teat.

Cabot pleads for the greater use of the playground wherein the child can amuse itself with simple toys, under the epigram, "the pen is mightier than the sword."

The dramatic age lasts from about three years to seven. It is the time for magic and fairy land; the kingdom of Peter Pan. They are days of phantasy and day dreams, views of the invisible. A remark made not long ago by my daughter is illustrative: "What a fine bathe I had today, daddy, I should like to put it in my pocket and have it again tomorrow."

It ushers in the dawn of responsibility, though the standards are original.

A little Boston girl horrified her mother by reporting that she has seen a great big lion in the Public Garden. "Oh, Peggy, that is not true, go upstairs and pray God to forgive you for your lying," the mother commanded. Peggy returned serene and suave. "Did God forgive you?" asked the mother. "Oh, yes indeed Mamma, he said don't mention it, Miss Perkins, I have often mistaken that big yellow dog for a lion myself."

It is the age *par excellence* for the inculcation of obedience and the laying of that terrible bogey-fear. The approach must be through the imagination and joy which comes from accomplishment.

"The match of success strikes the matchbox of desire and behold a flame; a birthday candle is lit in the child's history."

Onwards to the angular age which lasts until about eleven Cabot likens this period to the awkward muscular efforts of a Houdini in removing himself from a straitjacket. A great achievement is going on and it involves much wriggling. The child is bubbling with energy; drama has become prose; self consciousness, self assertiveness are in the ascendant. The result is the noisy, critical and sentiment-lacking stage which parents often find so difficult. Full of muscular activity leading to pugnacity and lawlessness, development has been well described by one writer as that of the "big injun."

The next two ages overlap and their margins are ill defined, the paradoxical ranges from twelve to fourteen and that of the "gang" from eleven to sixteen. The first covers early adolescence and has its physical basis in the difficult period of the commencement of sex and the change in metabolism which is represented. The term paradox is used to describe such peculiarities as the following. The adolescent shows poor health and rude spirits; emotions show timidness and rebelliousness, though a tendency towards sympathy and law is also in existence. Criminal statistics prove this to be the dangerous age, largely owing to love of adventure.

Homesickness and home shunning, loneliness, vague sorrows and the beginning of religion are also present, withal the child is often inarticulate and as

[1] Read at a meeting of the Central Northern Medical Association of New South Wales on March 30, 1927.

Cabot says it is necessary to "angle for the good points, even if they elude like a shy trout."

I suppose that we all have gone through the "gang period"—for parents it is an anxious time, because so much depends on the child's choice of companions. Team work is inculcated leading up to the ideals of service which spell citizenship; the substitution of "we" for "I" which later will become "you." This is the lesson of the public school.

When a boy commences to care for his appearance and diligently uses the mirror, he is probably ushering in the age of "romance." In addition to marrying the most wonderful girl in the world, reforming the planet, he will die for any other ideal of the moment!

It is a great age and passes all too rapidly into that of "problems," when truth seems less accessible, difficulty succeeds difficulty, the way of life being beset with stumbling blocks. This leads to a self centredness, the roots of which are often not appreciated. As the path becomes clearer by the formation of habits of work and play, manhood is reached.

In Table I. and Table II. are shown the periods of growth according to Cabot and the date of the appearance of instincts according to Stoddart.

Sometimes, owing to various causes the normal sequence is altered. Whilst the authority on each abnormality not unnaturally lays stress on the importance of his own theory, the conceptions are useful.

The normal child enjoys pleasure at its orifices, a trait which Freud calls "polymorph perverse." This autoerotic stage lasts for the first two years and the zones which are excited for pleasure are the mouth, inner surface of the thighs, the anus and neck of the bladder. The gratification obtained is sexual in origin. These tendencies are classed as narcissistic, on account of the old story of Narcissus who fell in love with his own reflection and they illustrate admirably the instinct of self regarding. Whilst the truth of the all embracing theory of sex is open to criticism, there can be no doubt that an undue fixation at this level may have serious consequences.

TABLE I.—SHOWING PERIODS OF INSTINCTS ACCORDING TO STODDART.

Age in Months.	Instinct.
1	Self nutrition and preservation.
2	Eye movements complete, passive attention, smile.
3	Handling movements become purposive, imitates sounds.
4	Fear of change, surprise, laughter.
5	Shrinks from strangers, sits up, carries objects to mouth.
6	Understands distance, grasps.
7	
8	Pleasure in making noises.
9	Says "Ba-ba," "Da-da" *et cetera.*
10	Locomotion.
11	Stands.
12	Walks.
13	
14	
15	
16	Voluntary language, says "Er."
17	
18	Curiosity.
19	Acquisitiveness.
20	Desires social intercourse.
21	Instinct of Cleanliness.

TABLE II.—SHOWING PERIODS OF GROWTH (CABOT) AND APPEARANCE OF INSTINCTS (STODDART).

Age in Years.	Periods of Growth (Cabot).	Appearance of Instincts (Stoddart).
1	Infancy.	Autoeroticism.
2		
3		Make believe and play.
4	Dramatic age.	Destructiveness.
5		Desire to love other than self.
6		Constructiveness.
7		Emulation. Rivalry.
8	Angular age.	Collecting.
9		Tuck-shop instinct.
10	Paradoxical age.	
11		
12	Age of the gang.	Hunting.
13		Fishing.
14		
15	Age of romance.	
16		
17	Age of problems.	
18		
19		
20		
21		

Later the boy fixes his affection on the mother and the girl on the father. These have been called the "Œdipus and Electra complexes" after old Greek myths. If carried to great length, the relationship is morbid. At puberty the bonds are weakened by erection of incest barriers in order that normal sexual connexions may follow.

Freud calls attention to the tendency to forget disagreeable memories, that is repression, a universal process, naturally harmful if remembrance were advantageous. More important is the fact that if two sets of ideas are warring in consciousness, the individual may react abnormally. Such "conflicts" are undoubtedly the basis of many nervous states.

The strut of a small boy in the presence of his elders reveals a tendency to compensate for lack of inches. Alder has usefully enlarged this theme by showing that when organ inferiority exists, it is balanced by "over compensation." The importance of assessing the physical factor and the danger of allowing the child to consider himself an inferior, are direct corollaries.

If exasperated with the poor progress of his homework, a fifteen year old child throws his books on the floor, he is behaving like a disgusted infant of two. This phenomena of "regression" is frequently seen and has been elaborated by Jung. When control is deficient, the nerve energy acts at a lower level, a procedure naturally leading to errors in behaviour. Not infrequently cases of nervous disorders fitting very aptly into this category are encountered.

Cameron traces faulty habits to (i) the child's imitativeness, (ii) its suggestibility, (iii) the love of power (iv) its misunderstood reasoning power. Whilst the first three factors need no further comment at this stage, the latter he illustrates by an example.

If a pair of scissors left by an oversight lying about, has been grasped, the first impulse of the mother is to snatch

the danger hurriedly from the child's hands and her action will generally be followed by resistance and a storm of weeping. She will do better to approach him quietly, telling him that scizzors hurt babies and show him where to place them out of harm's way.

Children dislike intensely the unexplained intervention of force.

Errors such as these are mainly responsible for our difficult children and one can ignore the pessimist who might say that all children are difficult or that there are no difficult children, but many difficult parents.

In truth the category of ills produced or aggravated by these simple mechanisms is formidable and includes such diverse symptoms as anorexia, asthma, bed wetting, breath holding, perverse conduct, constipation, convulsions, constant crying, digestive disorders, excitability, fear, refusal of food, habit spasms, hysteria, thieving, naughtiness, neurasthenia, faulty posture, sex errors, sleeplessness, somnambulism, thumb sucking, malnutrition, untruthfulness *et cetera*.

Whilst it is impossible in the space at disposal to discuss these in detail, the basic principles on which treatment depends, will be considered.

At the outset the impossibility of directly changing such intangible entities as character and instinct will be obvious. The approach must be circuitous using avenues revealed by the study of character formation. Some are more useful than others. The faculties for imitation, suggestion and play, so strongly developed in childhood, are indispensable. A fourth, the conditioned reflex needs further explanation. Pavlow in his original experiments associated the taking of food with a noise, until finally the gastric juice, at first only secreted on presentation of the former, appeared when a bell was rung. Similar functioning is repeated in every system of the body and occurs notably in the mass response known as behaviour. As early as ten days old a baby associates crying and being nursed. In precisely the same way the disagreeables of life are assimilated, for example scratches from pussies' claws and the burn from a lighted cigarette. The educationalist from the Stone Age onwards has so frequently used this mechanism for his ends, that is by associating virtue and reward, misdemeanour and punishment Pavlow's work may seem mere plagiarism. But, just as the savage utilized the force of gravity without knowledge of its precise nature, it cannot be denied that the discoveries of Newton had material results.

Kragnogorski in 1907 performed some very interesting conditioned reflex experiments on children by observing the swallowing movements accompanying the sight of food, whilst at the same time a bell gave an auditory stimulus. After two to ten trials associated functioning was established.

Florence Mateer (1918) has used a different procedure. She blindfolds the child and gives him a chocolate, naturally he swallows it, the process is repeated until the swallowing movement, as shown by a tambour, appears on being blindfolded, though the chocolate is withheld. This occurs after from three to nine trials in normal children, eight to eighteen trials in defective children. The number decreases up to the age of five years, boys under two learn more rapidly than girls, afterwards the relationship is reversed. The most apt pupils are the most intelligent when examined for mental age by standard intelligence tests. If the chocolate is not given, the conditioned reflex is inhibited after from three to twelve blindfoldings. Boys unlearn more rapidly than girls. These results are important because they are objective examples of how (i) all children are capable of acquiring conditioned habits after a ranging length of time, (ii) the habits are rapidly lost on cessation of the stimulus, (iii) in order to form a habit, the activity must be repeated in an invariable manner.

Translating the laboratory experiment into the practice of every day life, if a boy steals apples, is caught and invariably punished, the time for the apple orchard pain association can be expected to appear within a limited period. The point stressed is that for practical purposes in dealing with rewards and punishments we are considering a measurable entity, based on physiological laws and not on nebulous ethics. The result of such practices are inevitable and can be foreseen.

In the following two cases a deliberate attempt in difficult children has been made, firstly to associate a morbid trait with something unpleasant in order to produce its cessation, secondly by the use of imitation, suggestion and play to divert the activities into healthy channels. The procedure might be called one of invariable push and pull. Invariability is essential in order to form the conditioned quality, push refers to the correction, pull to the formation of the new outlook.

A.B., aged fourteen years, was sent to hospital with the unenviable reputation of being an *apache*. He was quite incorrigible, he screamed and complained of headaches when told to do anything of which he did not approve. In addition he threw stones at his elders and had a vocabulary which the proverbial Billingsgate porter could envy. Examination showed that his intelligence quotient by the Binet-Simon standard was 74. He had an attack of *encephalitis lethargica* which has left him with strabismus, a certain amount of inversion of sleep rhythm and a pronounced irritability of temper.

The first step in treatment was removal from contact with other boys, thereby limiting possible source of irritation. It was explained that he was recognized as "sick" and that the milk diet treatment for his headaches, screaming fits and general irritation would be employed. Every time he showed symptoms, immediately he would go to bed and would be dieted. This rule was rigidly carried out.

In my wards every endeavour is made to rule out the words "naughty" and "punishment." Disobedience is adventurous, holding as it does a possibility of avoiding punishment. There is no romance in bed and a not-to-be-avoided milk diet. After all the correct attitude to regard abnormal behaviour is as "sickness." In addition the boy was treated as a good fellow, his efforts were praised, he was informed of the excellent reports he would obtain and privileges were granted very freely. As a result in a few weeks he was back with the schoolboys and though I am afraid he will never be popular owing to his innate irritability and inverted sleep rhythm, at any rate he had

improved so much that his mother could manage him at home and his screaming fits are a thing of the past.

C.E., aged ten years, can hardly speak, but has much native intelligence and a pronounced instinct of self assertion. He delights in stone throwing and is never happier than when hurting one of the other children, in truth a very difficult child. Investigation showed that his pet aversion was solitude, so invariably after each lapse he was immediately sent away for a short period from his mates. "Sick, irritable boys need to be kept quiet" was the verdict. At the same time he was encouraged by rewards to better things. Whilst he is by no means a paragon (and what healthy boy is?) his improvement has been enormous.

Though the above children are defectives the principles in management are applicable to all. It must be emphasized that punishment should be avoided, though firmness is essential. The child is to be treated as a rational being who has a right to know what is expected of him.

Subterfuge will be quickly detected. Display of temper on your part will defeat the objective which is the creation of a suggestion, of omnipotence, knowledge and justice tempered with kindness. Briefly, the relationship should be one of friendship and trust.

The repetition of such phrases as "naughty again," "always in mischief" *et cetera* can serve only to convince the child mind that the imp of devilment is ingrained in his constitution. The infant bows to the inevitable, accepts punishment with philosophy and forthwith proceeds to repeat the wickedness.

A volume might be written about the dynamic force of a phrase. In all forms of psychotherapy and education words should be regarded as precious stones whose value must be accurately determined. I was reminded of this when I investigated a child's dislike of the colour yellow. I found that her mother happened to have said some days previously that a certain yellow dress was ugly. A chance remark therefore had changed the whole outlook on this question.

Like Caesar's wife, the adult's own actions must be above suspicion. A small girl was accused by her mother of tale bearing. She did not realize that she herself was to blame, since the nurse was always asked in the children's presence if any of the children had misbehaved.

A child loves power and when he sees that his refusal of food, his sleeplessness, constipation or disobedience create a stir, he continues in his habits. Moreover if the mother is constantly hedging in the child with restrictions "don't do this" or "don't do that," she is developing the innate negativism of the young mind.

Every child must be treated on its own merits. A slap in error may undermine all authority. A pear was left on the sideboard and the next morning it was noticed to have been bitten. When the family was asked as to who was the culprit, one of them blushed and was thereon quite unjustly shown up as being guilty. An impression of injustice against the father was produced which persisted into adult life.

Food Difficulties.

The nervous child when born is restless, easily tired and for this reason unable to suck effectively. Hunger soon appears, in haste to appeasement he bungles and then cries. A vicious circle is rapidly set up which reacts badly on the mother. Cameron suggests that the child whilst drowsy be carried to the breast and two or three times a day as meal time approaches.

A teaspoonful of a mixture containing potassium bromide 0·12 gramme (two grains), chloral hydrate 0·06 gramme (one grain), syrup 0·6 mil (ten minims) and peppermint water to four cubic centimetres (one fluid drachm) can be given with good results. After a few days when the freer milk flow appears, its use is discontinued.

Occasionally one meets a baby so somnolent that stimulants must be used instead of sedatives. A baby under my charge will only bother to take food when made to cry. In older children, a rebuke for not eating given perhaps when hunger is absent or desire for another dish on the table is present, may associate the feeling tone of punishment with a particular food, thereby forming a permanent food fad. As an example the case of my friend X may be cited.

He is an inveterate smoker, but will not consume a cigar. As a boy he sampled one and his father observing it invited him to see who could smoke the more quickly. The feeling of malaise experienced is reproduced to this day, even on smelling the aroma.

Vomiting after food is not infrequently due to nervous rather than gastric causes.

Sleep Difficulties and Fears.

A boy is hurried from his amusement to bed, not unnaturally he cries. This occurs again and the thought of bed is associated with that of tears. Is it to be wondered that sleep irregularities are born? Perchance other factors of great importance in the nervous child are at fault, too much or too little exercise, too tight or unsuitable clothing, stuffiness of the room, too great an anxiety on the mother's part. In breaking the faulty habit these factors are evaluated and dealt with, whilst at the same time the temporary use of sedatives is invaluable. I have found in addition to the employment of chloral and bromides small doses of "Luminal" or paraldehyde to be excellent.

During a recent storm the lightning awoke a child of my acquaintance who thereupon became a bad sleeper. In such a case a sedative is a commonsense expedient to usher in a return to good habits.

Night terrors in nervous children are very common and the cause must in each case be investigated. Overwork, excitement, faulty dietary, fears due to tales of bogey men or ghosts all contribute to the result.

I know a child who became frightened of night flying insects; instead of ridiculing her fears, a discerning father cured her by a frank discussion as to their nature and harmlessness.

Children often suffer in silence fears and phobias of all descriptions. Some nurses have the minds of ghouls and instil terrible thoughts into their small

charges. Frequently the cause is natural, an accident, a shock, a change in surroundings. A sense of inferiority and morbid sensitiveness may be based on real physical weakness. The day dreaming habits of the "dramatic age" may have been allowed to become excessive. It is necessary for the physician to appreciate the mechanism; this can be accomplished only by gaining the child's confidence, when little by little the innermost thoughts will reveal themselves and the cause may then be removed. It is a psychoanalysis of the simplest type, rather than one moulded on the Freudian pattern.

Enuresis.

Enuresis is a common finding in the nervous child, usually due to mismanagement on the part of the parent. The child is scolded nightly, until the infant goes to bed in miserable expectation of another lapse from grace. Concentration on each success, optimism on the part of the nurse and possibly a change to hospital routine will break the vicious circle. The cure lies in making the proper suggestions. This explains the success of hypnotism, also the occasional surprising efficacy of such empiric domestic remedies as the eating of a well boiled mouse. In older children, the provision of a urinal will help to give the confidence which is so essential.

The possibility of epilepsy as a cause of enuresis must be considered.

Habit Spasms.

The tendency to acquire a useless habit is one of the commonest features accompanying nervous instability. The form is protean, whilst usually it consists of a twitching movement in some part of the face. Any portion of the body may be involved.

The child either originates or more often copies the antic and is then brought severely to task. Much as in the mechanism of the production of enuresis, parental suggestions may be ill timed and faulty. The habit becomes further fixed and the obvious distress of the family serves to impress more vividly the hopeless outlook.

T.C., an obviously nervous but intelligent child, was brought to my clinic because he persisted in screwing up his face and "barking like a dog." He was placed in hospital, left severely alone and given sedatives. Fortunately his family could not visit him, so the vicious home circle was severed. He recovered fairly rapidly. On returning to his family whom I have never seen, he presumably came under the influence of the focus of infection and his symptoms have promptly returned.

In such a case it is obvious that the parents must be educated in order to help in the follow up treatment. If an underlying cause of nervousness can be discovered, the symptoms disappear the more rapidly.

A mother brought a bright, intelligent but nervy girl of six for treatment on account of blepharospasm. After a course of vermifuges for threadworms, sedatives and advice, the spasm promptly vanished and has not returned, though the child was treated solely as an out-patient

Thumb-sucking is an annoying practice which will, if persisted in deform the jaws. If the offending digit is swathed in adhesive plaster before bedtime, the rough edges are unpleasant and no sucking will tend to occur. Remembering that a conditioned reflex takes time to disappear, it will be realized that the procedure has to be repeated nightly for a week or two and sometimes longer.

Stammering is another variety of habit spasm, involving the voice production mechanism and is far more amenable to treatment on psychotherapeutic lines than is usually considered. The ætiology is still under discussion and its nature is somewhat different to the others described above. In justice to the parent it may be added there are cases in which the management has been good.

Sex Disorders.

Nations undoubtedly vary in their attitude to sex. Whilst Freud's findings may be correct for Austria, the incidence of sexual perversion is less when the available interest and attention is diverted to the arena of sport.

One of my patients, aged fourteen years, admits to desire for incest with her brother. Another girl has interfered with her small sister. Incidentally homosexuality is more common in the female sex.

Cases have been described in which the symptoms are due to a repressed desire for incest with the parent. The mechanism underlying the production of these trends is usually due to improper suggestions by the nurse, another child or even the parent.

Psychoanalysis of the Freudian type is apt to draw undue attention to sexuality. It is better to trust to the effect of a changed environment and the inculcation of good habits.

Almost every child masturbates for a time, but if tactfully handled it will cease.

Recently an intelligent child of eight was brought to hospital after an orgy of Onanism. It had been aggravated by the persistent scolding of the relatives and ceased after the little patient was induced to play games and do school work in an atmosphere of trust.

One chronic masturbater forswore her habits when treated on the "Sick-girls-interfere-with-themselves-and-need-a-milk-diet" principle.

The Epilepsies.

Epilepsy creates for the physician one of the difficult problems of childhood, since it entails the treatment of the very definite, finicky, grumbling, irritable, epileptic character, also the fits and their equivalents of emotional depression, excitement, confusion, delirium, stupor or automatism. Fortunately the term "the epilepsies" is coming into vogue and it suggests these findings are but symptoms of different underlying causes.

The day for the indiscriminate use of the bromides is past, but when used, borax may often be added with advantage; the combination is well borne over long periods. "Luminal" is frequently invaluable. The importance of treating the fit as a mere symptom is well shown by the following case.

T.W. had frequent seizures, these were entirely controlled by the use of bromide of potash 0·48 gramme (eight grains), borax 0·48 gramme and "Luminal" 0·06 gramme (one grain) three times a day, but she became irritable,

excitable and pugnacious. The doses were then reduced until she had an occasional fit and her character became much kindlier and she was more contented.

The cause of the seizure is said by some authors to lie in protein hypersensitivity. In my experience the procedure of skin testing is worth while, though the protein sensitivity is probably only one of the factors involved and is often too general to be of assistance. Brilliant results occasionally follow endocrine therapy, particularly the use of thyreoid and parathyreoid extract. With the latter is coupled the administration of calcium lactate.

There is no doubt that psychotherapy can in some cases be employed with advantage. For those whose fits occur in the exhaustion period, at night, the use of caffeine citrate is a promising new departure. Recently Dr. Prior and Dr. Edwards have suggested in this journal lumbar puncture as a remedial measure. Bowel intoxication and focal sepsis are possible causes which will need eradication. The treatment of epilepsy needs both time and patience.

The Hysterias.

The hysterical patient is often characterized by liveliness, sudden change in mood and an inclination to attract attention. The symptoms as with the epilepsies are protean and sometimes particularly in the case of seizures are indistinguishable.

Fits in infancy are usually mere congestive attacks. During childhood fainting fits are not infrequently mistaken for epilepsy or hysteria, the latter can be recognized by its oddness, absence of tongue biting, bed wetting, bruising *et cetera*, also the presence of a motive or a model. In all cases it is important to search for the two latter factors.

F.W., aged twelve years, came to the clinic for an hysterical paralysis of the foot. Analysis showed that this was based on a minor accident. By her inability to walk she had solved the problem of avoiding a difficult examination. Her recovery followed an explanation of the mechanism and a course of persuasion, suggestion and reeducation.

H.B., aged eight years, was sent to the clinic by Dr. J. Leah with a history of frequent hysterical seizures. These proved to be "love of power," realization of which was possible by reason of a doting mother. A stay in hospital with enforced lack of sympathy and an interview with the relatives in which their conduct of the child was criticized have considerably lessened the frequency of the fits.

Psychoses.

Kraepelin states that in a series of 903 cases of manic-depressive insanity the first attack took place in 0·4%, 2·5%, 16·4% of cases before the ages of ten, fifteen and twenty respectively. In a slightly larger number of *dementia præcox* patients the relative percentages showing evidence of the latter disease were 3·5%, 2·7%, 21·7%. Both diseases are rare in childhood, but the same cannot be said for the characteristics upon which they rest. An undue tendency to day dreaming and phantasy or the presence of negativism is suggestive of incipient *dementia præcox*. The normal child often illustrates in the transition from laughter to tears many of the symptoms of manic depressive insanity. Happily they are not usually, as in the following case, morbid in nature.

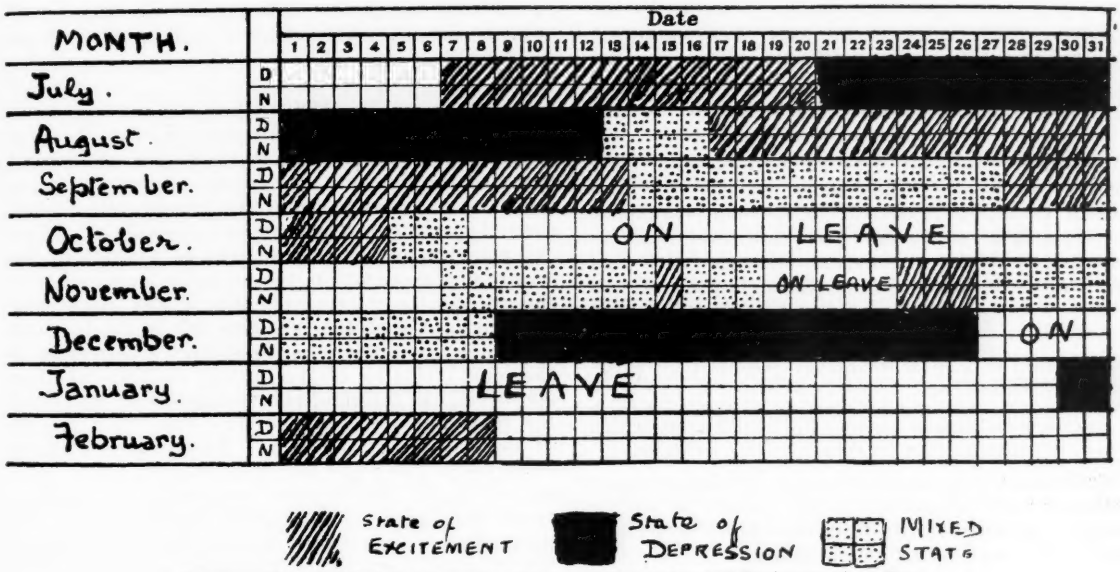

Diagram Showing Morbid Alternating S tates of Depression and Excitement in a Boy.

N.R.H., aged fourteen years, was admitted with a history of having had "fits" for years (nature unspecified). He showed a well marked alternation between (i) manic restlessness and excitement, (ii) depression and stupor, (iii) a "mixed" state in which he was regarded as normal.

The accompanying diagram shows this alternation.

The treatment in all cases will mainly consist in an attempt to eradicate morbid habit traits and the inculcation of a normal outlook.

Antisocial Traits.

Enough has been said to indicate the lines on which thieving, truancy, naughtiness, untruthfulness *et cetera* may be treated. In America increasing use is made of child clinics, where the advice of a trained psychiatrist and psychologist can be obtained. It would undoubtedly benefit the State, if in addition to this the Department of Education introduced a residential clinic so that difficult children could receive full examination and treatment. Frequently the removal from home conditions alone would be of great utility. In no sense should such an institution be a penitentiary. It must be staffed and equipped on hospital lines with a medical practitioner in charge. Patients would be sent by school authorities, general practitioners and magistrates. In the latter connexion attention must be drawn to the urgent need for a psychiatrist to be appointed to all children's courts. The necessity for a trained medical opinion is shown by the following brief sketch of the type of examination required in the case of any difficult child.

Outlines of Examination of a Difficult Child.

Clinical History.

Hereditary factors; type of parents and their conduct in child management; general environmental conditions; presence of psychic traumata. Information as to fits, sleep rhythm; dietary; constipation; worms; previous illness such as encephalitis, influenza, rheumatism, chorea.

Mental Testing.

Exclusion of mental deficiency essential for prognosis and treatment.

Intelligence testing based on Binet-Simon scale; use of physical survey as corroborative evidence.

Estimation of personality; social trends and habit patterns; manic-depressive trends; *dementia præcox* trends; introversion and extroversion; hysterical tendencies; psychopathic personality.

Physical Examination.

Physique and stigmata; serological tests to exclude syphilis.

Possibility of adenoids; enlarged tonsils; middle ear disease; refractive errors; oral sepsis; anæmia, albuminuria; endocrine disturbance; congenital ataxia; muscular dystrophy; paresis; Little's diease; chorea; hysteria; Parkinson's syndrome (post encephalitic); worms *et cetera*.

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EMPYEMA IN ADULTS: THE RESULTS OF AN ANALYSIS OF THE RECORDS OF EMPYEMATA TREATED AT MELBOURNE HOSPITAL, 1919-1924.

By J. R. WILLIAMS, M.D. (Melbourne),
Mount Barker, South Australia.

EMPYEMA was one of the main themes of the last Medical Congress and although surgeons and physicians met together and thrashed the subject out, very few facts were presented that encouraged the hope of improving the admittedly poor results. The following paper deals with the lessons learned from the results of a survey of the treatment carried out at the Melbourne Hospital during the five years 1919-1924 and from personal observations on the majority of the cases. It is hoped that some of the lessons taught by this experience may be of value to the general practitioner and to the hospital resident.

Statistical.

The number of cases analysed was 139. It is not proposed to present a large table that would occupy pages of the journal; so conclusions will be drawn and lessons shown without the classification being given *in extenso*. The age, sex, the side on which the empyema occurred, the seat of operation, the nature of the operation, the probable length of time the empyema was present before it was discovered, the length of time the tube was left in the thoracic cavity, the complications, subsidiary treatment and the length of stay of the patient in hospital after operation, are the chief points considered. As stated the total number classified was 139. The number of deaths was 22 or 16%. Two occurred under anæsthesia. The right side was affected in 75 cases, the left in 64. In 70 cases bacteriological examinations were made. The causal organism was the pneumococcus in 36 cases, the streptococcus in 28 and the staphylococcus in six. In some cases the *Bacillus coli* was obviously responsible, although examinations were not made. Rib resection was done in all cases but one. The average stay in hospital of patients whose condition was diagnosed under eight days from the onset of symptoms suggesting pus in the chest, was 5·6 weeks (36 cases). If over eight days 6·8 weeks (82 cases). If the tube was removed in eight days or less, the average stay was 5·4 weeks (30 cases). If over eight days, 7·4 weeks (40 cases). The discrepancy in the numbers is of course due to these salient points not being mentioned in the case histories. The patients with streptococcal infections averaged 6·8 weeks in hospital, those with pneumococcal infection 5·9 weeks. The complications were recurrence twenty-one cases, cerebral abscess seven cases, surgical emphysema one case, perinephric abscess one case, sloughing of the back with death one case. Mr. Hamilton Russell referred to similar cases to this last one in children at the Congress. The above forms the basis for the appended remarks.

Diagnosis.

It can be laid down that a missed empyema is a tragedy and, as in all diseases, early diagnosis is a prime factor. The so-called unresolved pneumonia which is so frequently an empyema, is at the root of most mistakes. It seems a pity that the term is not abolished from textbooks and teaching; it should at least be laid down that a diagnosis of unresolved pneumonia must never be made until empyema has been definitely excluded. The interpretation of physical signs of the chest to mortal practitioners is notoriously difficult; but the combination of a swinging temperature, a persistent cough, sweating, pulmonary embarrassment *plus* the most important of all, the evidence of the exploring needle, should prevent the overlooking of a purulent collection in the chest. The technique of needling is so simple, can be made practically painless and is of such enormous value that a word here may be useful

A "Record" syringe, a fine needle of about 7·5 centimetres (three inches) long, a 2% solution of "Novocain" and aseptic precautions are all that is necessary. An intradermal injection is first given. In the centre of the raised weal the needle is inserted and "Novocain" is squirted in front of the needle as it is slowly pushed through the subcutaneous tissues, the muscles and the pleura. If time and a good syringe of "Novocain" are used the first prick is all that is felt. A larger needle can be inserted along the original track if necessary. The procedure is so simple that one wonders why it is not more extensively used. Three inches of needle are worth a yard of physical signs.

Another fruitful source of empyema is the draining abdomen. Every one is a potential empyema. The methods of infection are fourfold: (i) *viâ* the retrocolic gutter and the subphrenic space, infection of the pleura and right sided empyema; (ii) the left sided route so ably demonstrated by Barnard; (iii) ether pneumonia, with the accident of empyema; (iv) an embolic phenomenon, presumably *viâ* the veins of the abdominal wall. In the first two types empyema may occur with or without a subphrenic collection, in my experience usually without. I have seen three cases of the fourth type during the five years under discussion. It is not uncommon to see all efforts directed towards a supposed collection in the pelvis, when an examination of the chest and the evidence of an exploring needle would solve all difficulties.

Anæsthesia.

The question of the anæsthetic is the next point. The risk of a general anæsthetic is great with the exception perhaps of nitrous oxide and oxygen; with this anæsthetic the patient's colour can be regulated by the amount of oxygen given and the toxic effect is nil. This anæsthetic, however, is not always at hand, but "Novocain" in a 0·5% to 1% solution is; hence I would call it the best form of anæsthetic. "Novocain" in the absence of contraindications (an intolerant or very nervous patient) can be freely used. In using this local anæsthetic the infiltration method of the skin and muscles over the selected rib is the best. Block anæsthesia, that is the injection of the intercostal nerves and their branches, even in skilled hands has not in my opinion been satisfactory and as a rule a combination of the both methods is used. "Novocain" in 1% solution is used for the skin and the periosteum, 0·5% is used for the subcutaneous tissues and muscles. No special needle is required for injecting under the rib. A straight needle bent at an angle of approximately 45° in a gas flame serves quite well for the purpose.

The Operation and its Objects.

The objects of operation in empyema are in the main two. One is to drain a collection of pus in the chest and the other to obliterate the cavity which contains it. The operation is easy. To resect a rib falls to the lot of most junior house surgeons. Where to do it is the problem. The favourite position is the ninth rib in the posterior axillary line. This is open to discussion. Dependent drainage is essential and as the patient is nearly always nursed on his back, the line of the vertebral border of the scapula seems more rational; the rib resected should be as low down as possible. Two points must always be borne in mind. First, with the obliteration of the costo-diaphragmatic angle which so frequently happens, it is not uncommon to come straight on to the diaphragm. To obviate this it is a safe rule to explore before operating as low down as possible and take the rib above. The second point is that the diaphragm is usually immobile at operation, but with the recovery of function of the lung the movement of the diaphragm is liable to close the opening made. The above rule will help in this also. I feel satisfied that the drainage is dependent and satisfactory, if on opening the pleural cavity and introducing the forefinger it rests on the dome of the diaphragm. If the opening is made too high the question of doing as Doyen suggests should be considered, namely passing a curved forceps to the most dependent portion, cutting down on the points in the intercostal space and draining there as well.

The second problem, closing the cavity, depends on one thing and one thing only and that is the return of function and expansion of the lung. Without restoring the negative pressure in the chest, in other words without closing the thoracic cavity, this cannot be effected. It therefore follows that efficient drainage and closing of the cavity cannot be maintained simultaneously. The upshot is that in most cases drainage is maintained at the expense of closure, in other words, the tube is left in the chest too long. This with failure to diagnose the condition early usually forms the basis of that tragedy, chronic empyema. If the condition is diagnosed late, the lung may be prevented from expanding by adhesions formed to the chest wall or the diaphragm by soft fibrin. Only in rare cases have I seen strong organization. When the chest is

opened, a pair of sponge forceps will remove most of this and, while not essential, it is helpful. It has been my experience that the opening of the cavity makes the fibrin tend to peel off and it will come away in the discharge at the time of operation or in the course of a day or two through the tube. The discharge rapidly alters from pus and fibrin with a little blood to sero-pus and fibrin, then to serum and small flecks of fibrin in the course of a few days. The lung should now be given every encouragement to expand. To leave a drain tube in position, except in unusual circumstances, for more than four or five days is not indicated and serves only to hinder the object in view. A long tube placed far into the cavity and gradually shortened is not good. The drainage will be inefficient; "drain to the pleural cavity not inches into it" is the guiding principle. Replacing the original with a smaller tube practically always condemns the patient to secondary infection and in my opinion should be avoided. The cavity, however, is still there and the surgeon is faced with the necessity of preventing a reaccumulation. I would suggest passing a long Spencer Wells forceps into the chest daily after early removal of the tube, for roughly a week; these are opened then widely and the patient is asked to cough. He is then encouraged to breathe deeply and to use Wolffe's bottles about seven days after operation. A practical point about Wolffe's bottles can here be noted. The patient should lie on his sound side or should fix the sound with the elbow and arm pressing into the lower ribs to restrict the excursion of the sound lung while he is using them. This mitigates the usual spectacle of a patient using his sound side overtime, while the collapsed lung is not being encouraged to expand.

I may here emphasize a working routine. Remove the tube in four to five days and put forceps along the track as detailed above for seven days after. Put patient on breathing exercises and Wolffe's bottles at the end of the first week. Get the patient out of bed if possible at the end of the second week and encourage him to walk about. Far be it for me to hint that all patients go straight ahead when these lines are followed, but the results above prove their utility. If there should be a reaccumulation, it is always smaller. A fresh start can then be made with the smaller cavity along the same lines as before, with the addition perhaps of scraping the cavity gently with a Volkmann's spoon so that the lung is not hampered by organizing fibrin.

Radiography.

The great value of X rays I will but touch upon, as it is not within the reach of a number of practitioners. As a primary diagnostic instrument it is valuable. As a guide and help in chronic empyemata it is essential. If the patient has been treated along the lines suggested with some recrudescence of symptoms, a stereoscopic picture of the chest gives the best indication in regard to where and how to evacuate the new collection. Still, judicious interpretation of signs *plus* the exploring needle will give all that is necessary in the vast majority of cases.

Bacteriology.

The bacteriology of empyema is another point that may be briefly dealt with. The majority are pneumococcal, but the percentage of streptococcal cases is high. A culture of the original pus should always be made. The streptococcal empyemata are certainly more difficult and dangerous to deal with, but the main points in the treatment holds for all types. The surgeon is tempted, however, to leave the tube in a couple of days longer, if the causal organism is a streptococcus, but on no account should it be prolonged for more than seven days.

Complications.

It can be laid down without hesitation that a draining empyema is a source of great danger to the patient and much anxiety to the surgeon. The most common complication is, of course, recurrence. The next in order of frequency is brain abscess. Seven cases occurred in the series, in six bacteriological examinations were made and a streptococcus was isolated in every one. It is hardly necessary to add that the seven patients died. The condition, as is well known, is usually multiple.

The Question of Aspiration.

Far be it for me to revive the controversy of the value of aspiration *versus* resection. Suffice it to say that all the patients in this series came to resection even when aspiration had been attempted beforehand. To my mind aspiration is useful in so far as it lessens the amount of collapse of the lung before the chest is opened; it may also give an indication of the amount of pus present, but I feel that it is not curative in adults and if persisted may actually induce the evils of late diagnosis.

Subsidiary Treatment.

Subsidiary treatment, such as washing out the cavity with saline solution, Dakin's solution *et cetera*, was not used as a primary curative agent, but only when it was obvious that rapid cure was out of the question. I have not had enough experience to be able to lay down any maxim about it and dismiss it with the remark that it is against the principle of restoring expansion of the lung.

Vaccines in protracted cases may be of value; but both of these last named measures imply the presence of chronic empyema which I wish so much to avoid.

Conclusion.

I will in no way attempt to write upon other causes of delayed healing of empyemata, such as preexisting fibrosis of the lung, bronchial fistulæ, pleural adhesions *et cetera*. This paper is designed to be a guide in the ordinary acute case. The best surgeons have dealt with chronic empyema and its treatment, but it is maintained by the writer that the need for the obliteration of the chronic cavity when the lung is unable to expand by drastic rib removal, will be rendered less frequent if the principles expounded in this article are followed.

Acknowledgment.

To the honorary and resident staffs of the hospital I wish to tender my thanks. All have been most helpful and have given me every opportunity to observe or operate on a considerable proportion of the patients in the series examined. Particularly would I like to mention the kindly interest, helpful suggestions and the ever ready counsel I have received from Mr. B. T. Zwar, Mr. Alan Newton, Mr. W. A. Hailes, Honorary Surgeons at the hospital.

PELLAGRA: A CLINICAL STUDY, WITH NOTES ON SOME CASES.

By S. J. CANTOR, M.B., B.S. (Melbourne),
Melbourne.

PELLAGRA is a diet-deficiency disease which is characterized by three groups of symptoms, nervous, alimentary and cutaneous. It is more or less world wide in its distribution. It is tending to become more common; this increase is in part apparent, as the disease is better known than formerly, but it is really owing to the increase in the consumption of poor carbohydrate diets.

Several theories as to the mode of origin of the disease have been entertained. The most important of these are the zeistic, the antizeistic and the vitamin deficiency. According to the zeistic view pellagra is due to the action of moulds on foods. This hypothesis is correct only in so far as decomposition of the food substances, such as maize and other cereals, leads to the destruction of the contained vitamins; just as in the same way decomposition of red rice causes beri beri. The antizeistic theories are mainly summed up in the word infective. Pellagra, however, cannot be transmitted in any way from pellagrins to normal persons. Secondary toxæmia from the alimentary canal plays a minor part only in the production of the clinical picture of the disease. Following the researches into the causation of beri beri by polished rice, the vitamin theory has received great support and the work of Goldberger, Wheeler and many others has made it clear that the disease is caused by a dietary of poor, vitamin-deficient carbohydrates combined with a deficiency of fresh proteins.

The importance of the disease is only commencing to be realized. Many cases of pellagra occur in which a diagnosis is made only with difficulty. The main diagnostic sign, the rash, may be very evanescent; it may not be differentiated from other forms of cutaneous disorder; it may indeed never appear. Nevertheless the other symptoms of the disease may occur, in an unobtrusive form perhaps, but none the less of importance to the patient. It is perfectly possible for a patient to proceed to a mild psychosis or to certifiable insanity without the suggestion of diet deficiency or of pellagra being made. It is possible also for the alimentary symptoms to be undiagnosed; indeed without the occurrence of the rash a diagnosis may not be possible and for such symptoms to receive what must be regarded as palliative treatment only.

Among such early signs and symptoms are disorders of the nervous system, such as neurasthenia, hysteria, insomnia, vague phobias, dizziness, occiptal headaches, muscular fatigue and mental depression. In chronic or in more severe cases the mental changes may go on to melancholia or confusional insanity; in these circumstances the patients are frequently suicidal. Amnesia and mental retardation are also early symptoms. Tremor is not uncommon.

Early manifestations of alimentary changes are seen in the slight pains, frequently of a burning character, in the pharynx and œsophagus; there is considerable salivation; the tongue is pale and flabby, with the filiform papillæ showing prominently. There is a deficiency or absence of hydrochloric acid in the gastric juice. Diarrhœa may be troublesome; it is frequently of an intractible character. There is evidence of intestinal decomposition, skatol appears in the fæces and indican in the urine.

These early manifestations, however, are not more than suggestive, as they may occur from other causes. The diagnosis cannot be made with certainty unless the triad syndrome of alimentary, nervous and cutaneous symptoms is present. The nature of the dietary used may help in an early diagnosis.

In the late stages of the disease dementia and death occur. The essential changes in the cells is a chromolysis. There is wasting. The patient appears prematurely old.

As the nature of the skin manifestations is of special importance in the diagnosis, it is desirable to describe the changes in detail. The eruption may appear in the spring, less commonly in the autumn; it is rarer at other times. It may, however, occur at any time. It is typically a sharply delimited symmetrical rash occurring most commonly on the face and on the back of the hands. It may occur on the back of the neck, on the collar area in front of the neck, on the scrotum, on the forearms and occasionally on the stocking area and elsewhere.

On the face the typical rash is on the cheeks and across the bridge of the nose; it occurs on the forehead in patches and elsewhere on the face. It may be raised and red; it may be present for one day or for a number of weeks. Sometimes there is a branny scaling and no redness. In children the cheeks only may be effected. There may be patchy, sharply defined areas of pigmentation, indicating erythema in former years.

Less commonly there is a moist eruption, frequently chronic, in which there is overaction of the sebaceous glands, giving rise to scab-like raised patches on an atrophic red skin. There may be other aberrant forms of eruption.

On the hands which are not always affected, there is the redness and infiltration of the skin; at first

almost scarlatinal and then erysipelatiform in appearance; later this turns to a more dusky red, raised, dry rash which at a later stage is replaced by pigmentation; this pigmentation is not always present. On the back of the forearms there may be a rather rough, slightly scaly condition; in severe cases a desquamative condition may affect the whole length of the limb.

On the scrotum the rash may be moist on account of its position; it may affect the adjacent portion of the thigh. It may be the earliest cutaneous manifestation.

The condition may resemble sunburn superficially, but the rash may occur when the skin has not been exposed to the sun. It may be persistent. It is erysipelatiform, generally symmetrical and sharply delimited. It may occur on non-exposed areas. There is a fine, dry scaling usually, never blistering or gross desquamation and the pigmentation which follows, tends to be chronic and, like the erythema, is patchy.

While pellagra occurs more frequently in orphanages, asylums, prisons and institutions generally, it does occur also among other people, especially among the poorer classes. The reason for this incidence lies in the dietetic origin. It may occur at any age; it occurs in both sexes. The importance of a liberal supply of fresh milk and of fresh proteins such as meat or eggs in the prevention of the disease cannot be overestimated. As McCollum and Simmonds state, pellagra occurs when the food supply is derived in great measure throughout the year from the grocery store; such foods are largely milled cereals and tinned foods. On such a diet ill-health and inefficiency are to be expected and experience abundantly shows that this result is being realized where such dietary practices prevail.

Much of the present knowledge of the ætiology of the disease is due to the industrious and well-planned researches of Goldberger. He was drawn to the dietetic origin of the disease after studying its incidence. It was noted that the various attendants and nurses did not contract the disease in institutions where it was common; he concluded that the staffs obtained better food. Using controls, he conducted an experiment with eleven white prisoners who were placed on a special poor diet. In five months six of the men developed pellagra. The experiment was discontinued after nine months. The diet used consisted of white bread, degerminated maize meal (corn flour), polished rice, starch, sugar, pork fat, sweet potatoes, collards, turnip greens and coffee. Protein was present in small quantity only.

Later work has shown that gelatin is of no value in that it cannot take the place of protein in preventing pellagra.

Preserved or spoiled maize, including maize products, appears to be the grain most able to produce pellagra, in the same way as polished rice is the most effectual producer of beri beri.

Pellagra is related to both beri beri and scurvy in that it has manifestations common to both of these latter diseases. On the one hand there are the gastro-intestinal lesions and hæmorrhages and on the other hand it partly resembles beri beri in the involvement of the nervous system. Chromatolysis is found in both conditions in cells of the spinal cord. Vedder has pointed out that, as the spinal fluid in pellagra is normal or nearly so, the disease is due to vitamin deficiency; since it appears improbable that such extensive changes can occur in the spinal cord as the result of an infection without producing corresponding changes in the spinal fluid. The symmetry of the skin lesions is attributed to changes in the central nervous system.

The evidence regarding infection as a cause of changes in the disease is in favour of its being secondary to the diet deficiency.

Pellagra-like conditions have been produced in animals by the administration of an appropriate poor diet. In Chick and Hume's experiments monkeys were fed on a low protein diet, the proteins of which were of low biological value. The animals developed lesions which resembled those of pellagra. These were bilaterally symmetrical and appeared to be heightened by direct sunlight as in pellagra. Nervous symptoms were not observed.

Wheeler stated in 1923 that "a prolonged interruption in the quantity of fresh meats consumed in the absence of an adequate supply of fresh milk or other protein foods frequently precedes the appearance of pellagra. A decrease or cessation in the supply of fresh milk may result in the appearance of the disease."

All the evidence, including the knowledge gained clinically, serves to emphasize the importance of good diet which includes fresh proteins. Poor carbohydrates must also be avoided. Faulty diet causes symptoms which one may term prepellagra and if the faulty diet is continued, manifestations of pellagra may be noted, if the subjects are kept under careful observation. The disease is prevented and cured by the inclusion of fresh milk, green vegetables, fresh eggs and fresh meat in the dietary.

Case Reports.

J.P., female, aged forty-two, has suffered from chronic conjunctivities since September, 1926; the condition had existed to an extent at an earlier date. On March 21, 1927, an erythematous rash occurred on the cheeks and across the bridge of the nose; there was also erythema with scaling on the eyebrow areas, on the neck adjoining the hairy area of the scalp, beside the lobules of the ears and slightly elsewhere on the head. The butterfly erythema on the cheeks and nose was present for twenty-four to forty-eight hours; the condition in the remaining areas somewhat longer and the desquamation was here more noticeable. There was also a dry, rough, scaly condition on the back of the forearms, this persisting for some weeks. Some upper corneal opacity (keratomalacia) was present in the right eye; this has since disappeared. The general health was good. There was some irritability and depression and the patient was more easily fatigued than usual. Slight gastric malaise was noted. In the mouth spongy gums were present. There was a somewhat flabby slightly furred tongue, more normal at the tip and edges; the filiform papillæ were red and conspicuous. The condition was diagnosed as pellagra.

M.T., female, aged sixty-nine years, was seen on March 21 to have a marked symmetrical eruption on the face; this eruption affected the cheeks and nose; it was present also on the chin and slightly on the forehead. The rash was raised, red and sharply delimited; it was erysipelatiform in appearance, especially as the edges were more raised and somewhat redder than the remainder of the rash. In this patient the rash persisted for several weeks. There were patches of old-standing pigmentation to be seen on the forehead and cheeks. Slight gastric malaise was present. This patient was in former years depressed and suicidal, other previous symptoms being present in the form of apprehensiveness, tremor, agitation and hypochondriasis; she also suffered from insomnia. The signs and symptoms in this patient are consistent with a diagnosis of recurrent pellagra.

L.O'C., female, aged thirty-six years, a patient in a mental hospital, is stated to have suffered from congenital mental deficiency; it is stated, however, that no history was obtainable. There are no stigmata indicating a congenital condition. This patient was for fifteen years in Nazareth House, Ballarat, where she was trained as a worker, this institution being a convent orphanage, prior to admission into a mental receiving house. From this latter she passed into the mental hospital. On reception in 1913 it was noted that she suffered from an extensive eruption (? papular) on the face, chest and faintly on the legs. Stupor was present. In 1914 she improved and was able to work; she has been a worker since. She became mentally improved, being cheerful, bright and contented. In 1919 she was still maintaining the improvement; she was vivacious, well behaved and neat—a contrast to her condition on reception. In 1920 it was recorded that she was sometimes depressed and that she was subject to gastric attacks. In December, 1926, she developed a symmetrical erythematous rash on the face; the rash was accompanied by scaling. The rash was of a semi-moist seborrhœic type. Scorbutic gums were present. The skin was somewhat active, œdematous, with exudation. The diagnosis of pellagra was made, although the manifestations were rather atypical. The condition was cured in a few weeks by diet.

This case is of interest, because a biographical *résumé* of her life was made, although no previous knowledge of the patient was in the possession of the medical attendant. On the grounds of chronicity it was hazarded that she had been in an orphanage, that she had become depressed, suicidal and unmanageable and that for such reasons she had been transferred to the mental hospital. It is probable that the disease was of dietetic origin. The patient is a slight chronic pellagrin.

F.G., male, aged sixty-eight years, had for a prolonged period been mentally depressed and suffering from melancholia. In former years there was a history of alimentary disorders, such as flatulence (I am quoting previous notes), acid eructations, indigestion *et cetera*. Nothing could be detected on examination, although the abdomen was protuberant and it was difficult to palpate the organs.

He also suffered from amnesia and was suicidal and latterly there was a degree of secondary dementia.

On May 5, 1926, he was in failing health, having been deteriorating for about two weeks; there was some hepatitis the urine was bile stained, the fæces were clay coloured and later slight jaundice of the skin was apparent. During this period there was occasional vomiting and occasional one day fever. The urine was free from albumin and the blood picture was normal, the main feature being pale red cells. The spleen was normal. During this attack the patient was more melancholic and suicidal than usual.

During the following months his health was good, his weight increased and he was less depressed.

On September 18 a butterfly rash appeared over the cheeks and bridge of the nose; there was also a symmetrical similar rash on the scrotum. The rash was dry and scaly, with slight hyperæmia. The tongue was flabby. The gums were red, spongy and raw and in parts ulcerated; there was erythema of the lips. Other symptoms present were indigestion and flatulence; vertigo, the patient occasionally falling forwards hesitating simple speech; neurasthenia, apprehension, increased melancholia and suicidal tendencies.

It had been previously noted that his mental condition was worse when the general health, including gastric symptoms, were worse.

The diet had consisted of the following articles: White bread, a comparatively large amount, rice, butter (preservatized), jam, some vegetables of a rather coarse quality and meat. When the latter was of the corned variety it was generally refused. No eggs entered into the dietary and milk was not available.

The rash gradually disappeared after prolonged slight branny desquamation; but the general health improved very rapidly immediately the patient was placed on a better dietary, including eggs, fruit and milk. There has been no ill-health since.

While the original cause of the mental trouble is uncertain, it seems highly probable that diet deficiency has played a part in its causation.

Another definite case was that of W.T., male, aged sixty years. On September 19, 1926, he noticed a red punctate rash on the face and on the dorsum of both hands. There was no rise of temperature. On the following day the rash was more erysipelatiform and macular; it soon became of a duller colour and dry; the skin appeared tense. The rash also affected the back of the neck. The gums were spongy and slightly ulcerated. Gastric and nervous symptoms were less pronounced, although the patient was a chronic, quiet dement. The general health was good. The rash gradually desquamated and faded away, leaving a trace of pigmentation. This man was never exposed at any time to the direct rays of the sun.

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OBSERVATIONS ON CERTAIN THERAPEUTIC MEASURES IN DERMATOLOGICAL PRACTICE.[1]

By W. UPTON, M.B., Ch.M. (Sydney),
Adelaide.

IT was my original intention to take up some of your valuable time with a brief account of several electrotherapeutic measures that are of especial value in dermatological practice.

However, I thought that perhaps it would be more interesting to describe in greater detail two therapeutic agents, ultra-violet light and X rays.

The Ultra-Violet or Actinic Rays of Light.

Sir Oliver Lodge has defined light as an electromagnetic disturbance of the ether and the ultra-violet ray is but a part of this disturbance.

It is called ultra-violet because the wave length is placed just beyond the violet ray of the spectrum. It is called actinic because it is able to excite chemical action, also because the effect it produces on photosensitive paper, is more pronounced than any other light ray.

For therapeutical purposes the length of the ray varies from 3,800 to 1,850 Ångström units:

$$1 \text{ Å.U.} = \frac{1}{10{,}000{,}000} \text{ M.M.}$$

[1] Read at a meeting of the South Australian Branch of the British Medical Association on March 31, 1927.

It has been stated that the rays lying between 3,800 and 2,960 Ångström units are able to penetrate the epidermis, but have no bactericidal effect, whilst those between 2,320 and 1,800 Ångström units are absorbed by the horny layer of the epidermis and have a definite superficial bactericidal action.

Sunlight, of course, is the natural source of ultra-violet light, but it may be produced artificially for therapeutic use by means of various electrodes, such as carbon, tungsten and mercury.

My experience has been chiefly confined to the mercury vapour quartz lamps—the air cooled and the water cooled lamp of Kromayer.

The rays of ultra-violet light are very superficial in their action, so much so that an ordinary hand towel placed over the area to be irradiated will entirely prevent a local reaction. It is evident that the means for protection are extremely easy.

The dosage is determined by the following factors, where, say, a mercury vapour lamp is used:

(i) The distance of the arc from the area to be irradiated. It must be always borne in mind that the intensity of the light varies inversely as the square of the distance, that is, if a certain effect is produced sixty centimetres (two feet) away, four times that effect will be produced at a distance of thirty centimetres (one foot).

(ii) The time of the exposure. This may vary from one to fifteen minutes.

(iii) The area to be treated at one exposure.

The immediate effects may be summarized as follows according to the dosage and susceptibility of the patient:

(i) Slight erythema usually appearing four to twenty-four hours after irradiation.

(ii) More definite erythema followed by desquamation.

(iii) Erythema, œdema and blistering.

(iv) Superficial ulceration which may be evident within twenty-four hours.

Pigmentation appears in most patients after any prolonged treatment, but this is more noticeable in carbon arc irradiations. The pigmentation usually clears up, but it is necessary to explain this effect to the patient when the exposed areas, such as the face and neck, are to be treated for any length of time.

On reading the reports that appear from time to time in the medical and lay press, a person who is not familiar with ultra-violet light, might well imagine that at last the panacea for all skin diseases had been found.

Whilst acting as a clinical assistant in the electrotherapeutic department of Saint John's Hospital for Diseases of the Skin, I had an opportunity of giving approximately three thousand applications of ultra-violet light. In a similar department at the Rhiel Clinic in Vienna this experience was further increased.

During that time I was able to treat and see the results of treatment in the majority of skin diseases. In my opinion there is no skin disease for which an eventual cure may be forecast with confidence as a result of the application of ultra-violet light.

Nevertheless this agent has a very great use in dermatological practice and is strongly to be recommended in certain lesions. The difficulty is that no two people may react alike. For example, two patients may have a similar condition such as furunculosis. A general investigation may throw no light on the subject, yet one patient's lesions will clear up in a remarkable manner, whilst those of the other may fail to respond.

The greatest use of ultra-violet light is undoubtedly in *lupus vulgaris* and the various other tuberculous and tuberculide conditions.

I have seen excellent results in many cases of the following diseases: chronic psoriasis, staphylococcal infections, certain forms of alopecia especially *alopecia areata*, chronic eczematoid conditions, *acne vulgaris*, slow healing wounds and ulcers and certain pruritic conditions.

Apart from *lupus vulgaris*, I have had the most satisfactory results in clearing up chronic generalized psoriasis.

Ointments are not very pleasant applications with which to cover the body, especially when the patient is not able to be confined to his room. In ultra-violet light we have a measure cleanly to apply and, if properly given, causing very little inconvenience.

Contraindications.

It might be asked if there are any harmful effects from ultra-violet light.

Some skins are much more susceptible than others. Young children, the aged and fair skinned people, should always have a very mild initial exposure.

As might be expected, the covered parts of the body are found to react more violently than the exposed areas. Old syphilitic subjects are liable to have severe reactions. It has been recorded from time to time that hæmoptysis has followed general irradiations in certain tuberculous patients.

Speaking generally ultra-violet light is contra-indicated in most acute dermatological conditions. It may act too much as an irritant and may actually spread the lesions. I saw in Vienna several patients suffering from *lupus erythematosus* who had been treated in the early stages with massive doses, and as a result widespread distribution had been caused. In fact at the Rhiel Clinic there is a rule that no patient with an acute skin lesion is to be treated with ultra-violet light.

Sunlight acting over long periods may cause a curious atrophic pigmented condition of the skin associated with telangiectases and warty growths. Many authorities consider that sunlight also plays a large part in the causation of rodent ulcers.

Although ultra-violet light has been used for several years, there is so far as I know very little evidence to suggest that artificial sunlight when applied in therapeutic doses, produces pathological

conditions akin to the chronic effects of natural sunlight.

As an example of an over exposure the case reported by Dr. MacCormac, of the Middlesex Hospital, is very interesting.

This patient of private means was accustomed to having irradiations at home, using his own apparatus and without medical advice. His routine was to have a daily bath of light for ten minutes, but one day he fell asleep and had approximately seventy minutes exposure. A severe skin reaction soon followed. Twelve days later a generalized erythema occurred over the whole body. This developed into an urticarial type of reaction. Five days later, that is seventeen days after the exposure, general symptoms occurred, extra systoles developed and the patient became seriously ill. An extensive purpuric rash occurred on the lower extremities. He ultimately recovered.

There is a tendency in England and on the Continent for ultra-violet light therapy to fall into the hands of untrained persons. In the interests of patients this agent should be applied only under medical supervision.

X Rays.

In X rays we have a potent measure for good or evil. Properly controlled and applied in suitable cases, there is no weapon of more use in the armamentarium of the dermatologist. The beneficial results of this form of treatment are gradually becoming more recognized.

Unfortunately most of you have seen from time to time disastrous results on the skin whether superficial or deep therapy was used.

Judging by recent discussions since my return, it is evident that there is a strong reluctance for certain practitioners to recommend X ray therapy to patients suffering from chronic skin diseases.

The type of condition that has every cause to carry such a prejudice in your mind, is well exemplified in the following patient. As a coincidence this was my first patient on commencing practice in Adelaide.

Mrs. X, aged forty-five, stated that fifteen years ago she was treated in another State for apparently tuberculous glands in the neck and for scrofulodermia.

X ray therapy was applied every week for several months. On examination she presented all the characteristics of a chronic radiodermatitis, with ulceration and superimposed epithelioma.

I shall mention two extreme examples of repeated dosage that have come under Dr. Sequeira's notice. One patient, afflicted with *lupus vulgaris*, had a thousand applications, whilst another, suffering from a rodent ulcer, was given weekly applications of X rays for twelve years!

A few visits to any large dermatological clinic will produce sufficient evidence of the appalling tragedies of the misuse or rather abuse of X rays.

The harmful effects of X rays on the skin may be described as acute and chronic.

The four stages of acute X ray lesions passing from epilation, erythema to actual ulceration and gangrene are too well known to require any further description.

In chronic radiodermatitis some weeks or even a few years may intervene before there is any clinical evidence to suggest any pathological changes. The skin usually becomes dry and smooth, it loses both its elasticity and its hairs. If the hands are affected, the nails undergo atrophic changes. Pigmentation appears and the small telangiectases and hæmorrhagic puncta complete the characteristic picture. Later on keratoses develope in the affected area and owing to the lowered vitality of the skin are easily stimulated to produce malignant changes.

Modern Technique in the Use of X Rays.

In Dr. Sequeira's X ray department at the London Hospital where I was priviliged to work, 20,000 exposures are averaged each year without risk of radiodermatitis. Such a satisfactory state of affairs has been made possible by a system of standard dosage. The amount of X rays that produces a mild erythema of the skin under certain conditions is known as the erythema dose.

X rays have the property of causing a disc covered with an emulsion of platinocyanide of barium and acetate of starch to undergo a series of changes in colour. The various changes always following in the same sequence depend upon the quantity of X rays. Upon these facts the Sabouraud Noire pastilles were invented. No exposure in the X Ray Department at the London Hospital is made without these pastilles. Standard permanent tints have been made and by using a tintometer the dosage is estimated. One-quarter of an erythema dose will produce a certain effect on the pastille and so on. This method is used almost exclusively in the British Isles.

In the United States the formula method of Remer, Witherbee and MacKee is more popular. Again the erythema dose on the skin is the unit of calculation.

Precautions in Dosage of X Rays.

It must be remembered that the effects of an erythema dose are spread over a period of four weeks, that is, if one full pastille dose has been given, no further exposure should be made for at least four weeks.

As a matter of experience it is rarely necessary or desirable to give an erythema dose, so that in most skin diseases when filters are not being used the epilation dose or four-fifths of an erythema dose is the maximum required. Four-fifths of a full pastille dose may be repeated in three weeks. Half a full pastille dose may be repeated in two weeks. One-quarter of a full pastille dose may be repeated in one week. If there are no favourable results after a few applications then clearly there is a definite indication to stop this form of treatment.

It should always be borne in mind that X rays should never be applied until the effects of some other treatment have been eliminated. Any form of irritant treatment lowers the skin's resistance, so that if this simple rule be not observed, disaster may follow when the epilation or erythema dose is applied. The following case illustrates this point.

A man, aged thirty, had a severe form of coccogenic sycosis which proved resistant to all the usual forms of treatment. It was decided to cause a temporary epilation of all the hairs on the beard region. He came up for

X ray therapy with his face acutely inflamed from the application of a strong irritant. Permanent epilation was caused and the patient was left with a permanent radiodermatitis.

Had a soothing lotion been used until the effects of the irritant had worn off, a vastly different result would have been achieved by the X rays.

It would be an excellent plan to give every patient a dosage card after superficial X ray treatment. It is a common experience to see patients who state that they have had a "course of X rays." It is not always an easy matter to ascertain the amount that has been given or what is of more importance, to decide how much further it is safe to persevere in this treatment.

It is now universally accepted that frequent small doses have a cumulative effect and may actually prove more harmful than a few comparatively large doses.

As a further precautionary measure it is necessary to remove applications that give off secondary radiations.

Copper, mercury, zinc and lead preparations are the chief offenders.

These secondary rays are "soft" and, having a selective action on the cutaneous cells, are liable to cause a radiodermatitis.

The Rationale of Superficial X Ray Therapy.

The exact mode of the action of X rays is not known, but from the clinical aspect four results occur on the skin according to the dosage.

(i) In very small doses X rays have a stimulating effect on the healthy elements of the skin. They have actually been used for this purpose in the treatment of indolent ulcers and certain alopecias.

(ii) In larger doses they have a distinct sedative action. In fact in certain pruritic conditions no measure is of more use in alleviating the distressing irritation.

(iii) In a dose four-fifths of an erythema application a temporary epilation results. This effect is made use of in such diseases as ringworm of the scalp, ringworm of the beard region and chronic sycosis. This method should never be used in the treatment of superfluous hairs.

(iv) In large doses or repeated small doses X rays devitalize the tissue elements and cause degeneration and interference with the reproduction of cells.

Pathologically altered cells, whether of epiblastic or mesoblastic origin, are less resistant to the rays than healthy cells and are devitalized by smaller doses, so that whilst these pathological cells may be destroyed, the neighbouring cells may be actually stimulated to growth or repair.

The list of skin diseases that may be benefited by X rays, is too long to be enumerated.

Apart from the conditions already mentioned, X rays have a great field of usefulness in the following cutaneous lesions: Rodent ulcers that have not invaded bone or cartilage, the indurated types of *acne vulgaris*, acne keloid, nearly all forms of chronic patches of eczema, psoriasis, multiple warts, generalized furunculosis and certain cutaneous manifestations that may appear in the lymphogranulomata (*leuchæmia cutis, mycosis fungoides et cetera*). Many conditions may be added to this list.

No one pretends that psoriasis is cured by X rays, but the eruption of the exposed area is quickly cleared up and the patient's skin may remain clear for months or years.

In certain fairly generalized eruptions when X rays are considered suitable, it is often a good plan to treat a limited area and see the effect on the other lesions. In an extensive case of warts I have seen one hand treated successfully with X rays and the remaining lesions disappear spontaneously. In a case of furunculosis a similar result was obtained. It is thought that the tissues have been desensitized by the X rays causing a reaction which results in the formation of a kind of autovaccine.

High frequency, diathermy, ionization and radium all have their place in dermatological practice, but like X rays and ultra-violet light they too have definite limitations.

For the rational treatment of any cutaneous disease it should be the aim to find out the cause.

This may demand a very careful investigation into all the systems requiring at times the aid of experts in the various branches of the healing profession. Even then the ætiology may still be obscure and one is perforce left to treat the surface lesion.

It is then necessary to appreciate the pathological changes underlying the clinical picture in order that the most suitable form of therapy be applied for the cure or relief of the patient.

Reports of Cases.

MULTIPLE SUPERFICIAL SCARRING ULCERATIONS OF THE SMALL INTESTINE AND DUODENAL SCAR WITH PYLORIC OBSTRUCTION.[1]

By MALCOLM SCOTT, M.D., M.S.,
Honorary Assistant Surgeon, Adelaide Hospital;

AND

J. B. CLELAND,
Professor of Pathology, University of Adelaide; Honorary Pathologist, Adelaide Hospital.

IN the following case an unusual type of intestinal ulceration was present, affecting the small intestine and giving rise to multiple superficial ulcers, many of which showed partial healing by thin scar formation. The ætiology of the condition is unknown to us. The scar in the duodenum suggests that a similar type of ulcer had existed there and had healed and some hypertrophy of the pylorus indicates some consequent obstruction. The duodenal condition to which some of the symptoms seem referable and which led to the gastro-enterostomy, was not an ordinary chronic ulcer.

Clinical History.

K.H., aged thirty-six years, a traveller, was admitted to the Adelaide Hospital on January 31, 1927. He complained of having had pain in his abdomen for five to six years, the pain being localized to a spot 7·5 centimetres (three inches) to the left of the umbilicus. It did not

[1] Read at a meeting of the South Australian Branch of the British Medical Association on March 31, 1927.

radiate and bore no definite relationship to meals. Occasionally he vomited at irregular times and in the previous twelve months his weight had decreased by 12·6 kilograms (two stone). Prior to admission he had had some looseness of the bowels. In March, 1925, a gastro-enterostomy had been performed by a private practitioner and relief from symptoms for six weeks followed. In August, 1925, his frontal sinus was drained and in January of the following year his appendix was removed. He denied having ever had venereal disease.

Examination revealed a thin man of healthy aspect, afebrile, with a regular pulse of 92. Examination of the heart and lungs revealed no abnormality. In the abdomen there was deep tenderness 7·5 centimetres (three inches) to the left of the umbilicus without rigidity or tumour. The liver dulness reached to the fifth space superiorly, but was not enlarged downwards.

On February 9, 1927, the epigastrium was explored. At the pylorus an indurated area was found and was taken to be his juxta-pyloric ulcer. The old stoma was patent, admitting the tip of the index finger and showed no evidence of ulceration. The proximal portion of the jejunum was surrounded with dense adhesions and although sought for, no ulceration was found in that portion of the gut. Under difficult circumstances the stoma was enlarged so as to admit two fingers. Considerable shock followed the operation and on February 10 and 11 he developed an irritating cough with a temperature ranging from 38·3° C. to 38·6° C. (101° F. to 101·6° F.), with a pulse of 130 to 150. His sputum which was purulent, was examined for acid-fast bacilli, but none were found. Some signs of consolidation were discovered at the right lung base and he was suspected of having bronchopneumonia.

For the ensuing four weeks his cough persisted with a low grade pyrexia which did not exceed 37·8° C. (100° F.). Every day he vomited several times and as time went on he vomited less frequently, but with greater regularity and larger amounts of fluid, varying from six hundred to seven hundred and fifty cubic centimetres (twenty to twenty-five ounces). During this time he suffered from obstinate constipation which required enemata for relief.

His emaciation increased and on March 8, 1927, under ether anæsthesia his epigastrium was explored again. The stoma was found to be patent and free from kinking. The proximal 7·5 centimetres (three inches) of the jejunum, however, were found to be extremely friable and distorted by scarring of the walls. This afforded an explanation of the vomiting, so the portion of affected gut was resected and an end-to-end anastomosis performed and in addition a jejunostomy.

Severe shock followed the operation and in spite of means adopted to combat it the patient succumbed on the following day.

Post Mortem Notes.

The body appeared to be that of a man of the patient's age. It was greatly emaciated and the eyes were sunken. Death appeared to have been due to the shock following the operation, as there was no peritonitis and only a little blood in the peritoneal cavity. Below an adhesion on the outer aspect of the right lung an abscess cavity the size of a walnut with mucopurulent contents was found, probably the result of an inhalation pneumonia following one of the operations. There was definite slight hypertrophy of the pylorus. There was no manifest obstruction in the duodenum. In the first part of the duodenum just beyond the pylorus on the posterior wall was a puckered band with a little pouching of the duodenum on either side; beyond this stretched some radiating and scarred tissue. Beginning about two metres (six feet) from the commencement of the jejunum was a series of superficial scarring ulcerations which extended to sixty centimetres (two feet) from the caecum; in the ileum they were numerous in places, one occurring in every 5·0 to 7·5 centimetres (two to three inches). The ulcers were superficial and frequently had a thin, somewhat puckered scarring on one side with extension on the other. Their appearance suggested an origin in the rugæ; they usually were slit-like and ran transversely and were sometimes forked. Early ulcers appeared as a small circular area with a red rim on one of the rugæ. Occasionally the ulcers were about one inch in width, but in most cases they were quite narrow. The base was not appreciably thickened and was usually nearly clean whilst the rim was only slightly raised and reddish. The peritoneal surface was unaffected. In the caecum were several ulcerated serpiginous patches of similar type. The colon was not ulcerated.

Comment.

The ulceration present in this case does not seem classifiable under any of the ordinary pathogenic lesions of the small intestine. The ulcers were not like those of enteric fever or of tuberculosis. They were quite superficial and tended to heal, leaving only a slightly puckered scar. Enteric fever ulcers, it may be noted, leave behind no obvious scars at all.

The position and lateral extent of some of the ulcers would suggest that they had originated on the rugæ, but in the lower part of the ileum and in the caecum the rugæ were insignificant in size. The scarring in the duodenum resembled that of the ulcers of the ileum and there was not the induration that so often accompanies a chronic ulcer in this situation. It would seem probable that the duodenal ulceration which had healed and the multiple ulcers lower down, were both due to a common cause and that the patient's symptoms were referable to this condition. Finally, emaciation followed as a consequence of the ulcerations of the intestine which would interfere with the movements of the bowel and lead to the absorption of toxins.

GAS INFECTION OF THE UTERUS WITH JAUNDICE FOLLOWING ABORTION.[1]

By F. H. BEARE, M.D. (Adelaide),
Honorary Assistant Physician for Infectious Diseases, Adelaide Hospital;

AND

J. BURTON CLELAND, M.D. (Sydney),
Professor of Pathology, University of Adelaide.

THE following is a typical case of *Bacillus welchii* infection originating in the uterus following on an abortion which was presumably induced. There was the usual rapidity of development and jaundice and blueness (that is, a cyanosed appearance) were present at the last due in all probability to the hæmolysis. The liver did not show very much change macroscopically or microscopically. From its resemblance to previous cases of which he had experience, Dr. Rupert Magarey diagnosed the condition as being probably a *Bacillus welchii* infection and this proved to be correct.

CLINICAL HISTORY.
(F. H. BEARE.)

C.A.H., married, aged forty-two years, home duties, first consulted me on October 6, 1926, on account of "not feeling herself and palpitations of the heart." In addition to this she was worried about her "periods." They had been quite regular and natural up to the last one which began about fourteen days before and was very scanty, but she had been losing slightly off and on ever since. She thought she was not pregnant and hoped that she was not. She had had no pelvic or abdominal pain. On examination the uterus was found enlarged to about the size of a six weeks' pregnancy. The *os* was open to admit a finger tip easily and the cervix was soft, but the signs were not at all conclusive as to whether pregnancy was present or not, the more so as I know that she had had a subinvoluted uterus from her last confinement some five years previously. The heart and other organs were seemingly normal. I told her that I could not say definitely whether she was pregnant or not, but suggested that she should come back again for further examination later on. I

[1] Read at a meeting of the South Australian Branch of the British Medical Association on March 31, 1927.

advised her to rest in bed for a while and gave her a sedative mixture.

On October 15, 1926, she sent for me to come and see her for she was still losing a little. Her condition was unchanged from the last examination on October 6.

On October 20 I was sent for urgently about 6.30 a.m. She then gave the following history. On the previous day she had not felt at all well. She went out, but had had to come home for she felt so weak and giddy. She had been unable to eat anything at all. During the previous night she had felt very ill and had suffered from severe pain in the abdomen and during the early morning she vomited and had profuse watery diarrhœa. She thought that she had eaten something that did not agree with her.

She was obviously very ill, her pulse rate was about 150 per minute and thready, the temperature subnormal and the breathing sighing in type. She was not definitely rigid over the abdomen, but was intensely tender. I saw her again about 11 a.m. and as her condition, in spite of restorative measures, had got worse, I ordered her into a hospital. At midday the temperature was 37·2° C. (99° F.) and the pulse weak and rapid. During the afternoon Dr. Rupert Magarey saw the patient with me and expressed the opinion that it was due to a *Bacillus welchii* infection. No operative measures were carried out, nor were they thought advisable. From about 9 p.m. the pulse was not present at the wrist, the temperature was subnormal and the skin cold and clammy. Morphine had relieved most of the pain, although the patient was very alert mentally.

During the early morning (at daybreak) it was noticed that the patient was very jaundiced. The extremities, the hands more than the feet, were intensely cyanosed to an almost black colour, as were the lips. The cyanosis gradually spread upwards and was finally scattered over the trunk, the skin was very cold. The patient vomited most of the fluid given her. Finally she died about 8 a.m. on October 21, 1926.

A prominent feature was her mental alertness up to the last. The picture of a gradually extending deep cyanosis in an intensely jaundiced skin in a patient so very mentally alert and free of distress, was one not easily forgotten.

PATHOLOGICAL REPORT.

(J. B. CLELAND.)

An autopsy was carried out within four hours of death. The body was intensely jaundiced. There was no definite escape of gas on opening the peritoneal cavity which contained in its lower part a considerable amount of blood-stained fluid. The small intestines and omentum were discoloured. The uterus rose 3·75 centimetres (one and a half inches) above the pelvic brim and was greatly discoloured and crepitant to the touch. On its anterior aspect there were present a large mottled irregular yellow area, another smaller one with a dark red border and a third greyish patch. The posterior surface was mottled and reddish-purple. No perforation was recognizable. There were some erosions around the *os* and little speckled red areas. A little shreddy pale material was escaping through the *os*. The uterus measured about 11·25 centimetres (four and a half inches) in length and 7·5 centimetres (three inches) laterally. On opening it some placental remains were found adherent to the fundus posteriorly with a little clot. The posterior wall was crepitant and the fundus posteriorly was dark red, spongy and rather soft. The anterior wall was firm with some pale areas in it. Both Fallopian tubes, especially the right, were intensively congested and almost black. The ovaries presented a similar appearance, the right ovary appearing black on section from blood extravasation. There were no obvious clots in the veins of the broad ligament. The dark colour seemed due to diffuse blood infiltration which extended into the adjacent pelvic walls. The bladder was contracted, the mucosa being very œdematous posteriorly. The rectum was congested. The lungs were overdistended with air in the upper part and manifested some superficial collapse below. The heart contained no valvular lesion. The spleen was a little enlarged, dark red and moderately firm. The stomach, duodenum and pancreas were normal. The liver presented a pale pasty appearance; gas bubbles were not recognizable. There was some blood-stained fluid in the small intestine, but not in the transverse colon. On examination of the kidneys some cloudy swelling and a small extravasation of blood into the cortex near one apex were found. Secretion was present in the breast.

Swabbings taken from the uterus, liver, gall bladder, spleen and heart blood and inoculated into cooked meat medium all revealed the presence of large Gram-positive, gas-forming, anaerobic bacilli and in subcultures *Bacillus welchii* was identified. Microscopical sections of the uterine wall revealed considerable leucocytic infiltration of the mucosa. In two sections of the liver little change was noted in spite of *Bacillus welchii* being present therein at the autopsy.

COMPLICATED DEXTROCARDIA.

By JAMES E. SHERWOOD, M.B., Ch.M. (Sydney),
Honorary Outdoor Physician, Saint Vincent's Hospital, Sydney.

THE patient, a male, aged forty-seven years, a motor driver for about fifteen years, was apparently quite well until four to five months ago, when he suffered an attack of "influenza" during which he had a good deal of pain in the left side of the chest in the normal precardial region. He was confined to his bed for two weeks at this time and during his illness commenced to suffer from "shortness of breath." This dyspnœa on slight exertion has persisted ever since. He has also been subject since to attacks of nocturnal dyspnœa. The attacks are ushered in by a fit of coughing during which he coughs up a "white froth" with considerable relief. He is further relieved by lying on his right side.

Alimentary symptoms do not trouble him. Headache and backache are never present. Cough and sputum are absent apart from his nocturnal attacks. Throughout his life he has had to rise to micturate once and sometimes twice per night.

His family history appears to be of no importance. One brother suffered from bronchial asthma at fifteen years of age and completely recovered later.

His total previous illnesses consist in "attacks of influenza" on four occasions. On examination the patient appears pale, of slight build, with a sallow complexion. Mouth and throat are clear. The abdomen appears clear, except occasionally for some slight tenderness to pressure 1·25 centimetres (half an inch) below the left costal margin. This is not a constant feature. Although the following cannot be definitely asserted, the normal liver dulness to percussion seems absent from the right side and present on the left instead, in the region of the normal spleen.

The chest appears definitely emphysematous with a broadened subcostal angle. Marked pulsations are visible in both supraclavicular regions, at both elbows, in the region of the xiphisternum and in the sixth right intercostal space 1·25 centimetres (half an inch) outside the nipple line. This latter pulsation has been noticed by the patient for as long as he can remember and also its absence from the normal situation. The pulsations are definitely palpable and no thrills are present. The apex beat on palpation and percussion seems definitely to be in the sixth right intercostal space 1·25 centimetres (half an inch) outside the nipple line. The cardiac dulness appears to extend definitely to the right instead of to the left of the sternum. Soft, blowing, to and fro murmurs are audible at the apex and for some distance out into the right axilla as well as at the base of the heart.

The radial pulse is inclined to be of the "water hammer" variety, the rate about 90 beats to the minute and regular. The vessel walls are palpably thickened. The systolic blood pressure is 140 and the diastolic blood pressure 70 millimetres of mercury. There are no signs of œdema anywhere. Both pupils are equal and react and the knee jerks are active.

The urine is acid in reaction; its specific gravity is 1026. It contains no albumin, no sugar or other abnormal constituents.

X ray examination of the chest (Dr. Bede Harrison) confirms the suspected condition of dextrocardia, the report being: "Dextrocardia with extreme cardiac dilatation of complete decompensation."

The response to the Wassermann test in the blood serum is strongly positive (+++).

I thought the condition of dextrocardia, complicated by an aortitis apparently of syphilitic origin, worth reporting, especially since there seems a possibility of there being transposition of viscera as well. Opportunity has not yet arisen for confirmation of the latter.

PSEUDO-MYXOMA PERITONEI OF APPENDICEAL ORIGIN AND MUCOCELE OF THE APPENDIX.[1]

By J. B. CLELAND, M.D.,
Marks Professor of Pathology, University of Adelaide:

AND

J. G. SLEEMAN, M.B., B.S.,
Medical Superintendent, Adelaide Hospital.

ON the *post mortem* table during the last few years two cases of large mucoceles of the appendix have been seen. Both were in old men. In one the appendix had gradually increased in size until it was as big as a football and contained jelly-like material. In the other case the dilated appendix had not reached the same size, but had ruptured and its contents had given rise to the condition known as *pseudo-myxoma peritonei*, of which it was a very good example. The most common cause of this condition is rupture of a pseudo-mucinous ovarian cyst. Cases of appendiceal origin come next in frequency.

CASE I.

Pseudo-Myxoma Peritonei Following Rupture of Mucocele of the Appendix.

J.M., a male, aged seventy-one years, was admitted to the cancer block at the Adelaide Hospital under Dr. J. S. Proctor on September 1, 1925, and died on September 29. At the autopsy Dr. M. Mocatta, on opening the abdomen, found the great omentum converted into a solid gelatinous mass 5 to 7·5 centimetres (two to three inches) thick. In places this material covered all the abdominal viscera with the exception of the liver. The peritoneum and mesentery were covered with gelatinous material and the pelvis was filled with it. A sheet of it covered the diaphragm. The appendix was found to be enormously dilated being about 7·5 centimetres (three inches) by 3·7 centimetres (one and a half inches) in size; it was filled with grumous gelatinous material, its walls being in parts calcified. No primary so-called "colloid" carcinoma could be discovered in the stomach or elsewhere.

It seems reasonably certain that the pseudo-mucinous material in the peritoneal cavity had escaped from the enlarged appendix. This mucocele of the appendix must have existed for a long period of time as shown by the calcification in its wall. Eventually leakage had occurred and the material had become spread over the peritoneum giving rise to the pseudo-myxoma.

CASE II.

Mucocele of the Appendix and Bronchiectatic Cavity.

W.J.C., a male, aged seventy-six years, was admitted to the Adelaide Hospital under the care of Dr. F. S. Hone, on August 9, 1923. He had then hæmoptysis and hydrocele. The cause of the hæmoptysis was found to be bronchiectasis and he was treated accordingly. The hydrocele was tapped and the fluid contained numerous pus cells and staphylococci. He became better and was discharged without having had any symptoms referable to the alimentary tract.

He was readmitted on June 5, 1926, again under the care of Dr. Hone and again with hæmoptysis. The cause and treatment were as before. He still did not complain of any constipation or diarrhœa, but there was in his right lumbar region a hard ovoid tumour with its long axis vertical. It was movable and about ten centimetres (four inches) by 7·5 centimetres (three inches) in size. The percussion note over it was tympanitic. This tumour had been felt when the patient was in hospital three years before and had then been regarded as a kidney. He died on June 20, 1926.

At the autopsy in the right iliac fossa extending upwards under the liver was a large fluctuant tumour about the size of a football. The ileum ran into this mass and the ascending colon emerged from its upper border. At the *post mortem* examination the wall of the mass was thought to be composed of the wall of the caecum. The wall was thickened in places. No appendix could be detected. The tumour was quite retroperitoneal. On section it was filled with a reddish jelly-like material with here and there small soft putty-like masses. There were no other lesions of moment except a bronchiectatic cavity in one lung, an enlarged prostate, cystitis with pus and evidence of peritonitis.

[1] Read at a meeting of the South Australian Branch of the British Medical Association on March 31, 1927.

Reviews.

PHOTOMICROGRAPHY AND BACTERIA.

PHOTOMICROGRAPHY in the classification of bacteria is the main theme in the second volume of the bacteriological studies of the Thomson brothers, mainly the work of D. Thomson.[1] Four of the papers noted in the table of contents appear to be missing from the binding, the text commencing with page 29. J. J. Thomson contributes a short paper on cattle breeding from the point of view of immunity to tuberculosis. The modern dairy cow is a highly artificial animal. She is so fed as to produce her own weight in milk in two weeks. All functions are sacrificed for milk production. So great is the activity of lactation that the growth of her calf before and after lactation is quite a different affair from that of a normal animal. The calf of such a cow may be big at birth, but possesses little power of assimilation in its earlier life. It will be manifest therefore that under such conditions of strain, acute tuberculosis is a common development. J. J. Thomson carried out active immunization experiments with fractions of the tubercle bacillus made according to D. Thomson's detoxication method. He concludes that immunization is possible in all cases, if treatment is given over two generations, except in the case of offspring of cows in ill health and that partial immunization of the dam and complete immunization of the sire are indicated. These methods can be successful only in the hands of a breeder who never loses sight of his standard of type. The introduction of general immunization against tuberculosis in cattle will be a slow process.

The greater part of the volume is contributed by D. Thomson and is a systematic discussion of the literature on that group of bacteria commonly known now as the corynebacteria, the diphtheria bacilli and the diphtheroid bacilli. The confusion in terminology is deplored and the criteria used in classification are criticized. The volume ends with a description of the author's method of investigation and classification of this group. The primary criteria are the production or non-production of colours, heavy or light growth on standard media and aerobic and anaerobic

[1] "Annals of the Pickett-Thomson Research Laboratory," Volume II; 1926. London: Baillière, Tindall and Cox. Demy 4to., pp. 175, with illustrations. Price: 42s. net.

growth. Secondary criteria are the fermentation reactions obtained with glucose, maltose, galactose, saccharose, lactose, mannite and dextrin. Employing his primary criteria he classified seventy-two diphtheroids into five groups. Photographs are taken of a new bacillus and its colonies after its group has been determined and these photographs are compared with the various types in that group and "if it seems to correspond in appearance the sugar tests can then be carried out for confirmatory evidence." "If these do not entirely agree with the organism it resembles, the test can then be repeated in case a mistake has been made." The various types in each group are then described. Each has as it were "a short title," for example diphtheroid, Group I (non-chromogenic, profuse grower, aerobic or facultative anaerobic) Type + — + + — — — (fermentation reactions) Number 1. On the opposite page are four photographs of the bacillus magnified 1,700 times, of the colonies magnified 20 times, and of a colony magnified 150 times, and of a stroke culture, natural size. Altogether there are forty plates and about three hundred and twenty photographs. This is indeed honest labour. The photographs are not all equally good. Many are indeed excellent, but there are inherent difficulties in photographing colonies. They vary in their elevation above the surface of the media and it is possible to focus the point of greatest elevation or different planes below and it is obvious that the focussing has been variable. The corynebacteria are not a very interesting group. They are a bugbear to the working bacteriologist on account of their wide distribution. After a generation of unfounded suspicions of pathogenic significance, one by one to be exploded, they are now regarded as the good gardener regards weeds. However, Thomson promises in his next volume to classify photographically the streptococci, an equally difficult, but more interesting group of bacteria and we look forward to this work with some zest.

LECTURES ON PUBLIC HEALTH.

THE de Lamar lectures were instituted in 1920, but it has only now been found possible to publish them.[1] The first volume published in January, 1927, includes only the lectures of the sixth session, 1925 to 1926. The scope of these lectures is very broad and the wish expressed by Joseph R. de Lamar in his will "to give to the people of the United States generally the benefits of increased knowledge concerning the prevention of sickness and disease and also concerning the conservation of health by proper food and diet" has been faithfully carried out by the distinguished lecturers. In all there are thirteen lectures originally intended for a lay audience, but full of the newer ideas and movements most valuable to those more technically interested. In fact most of the lecturers in the setting forth of their subject have made a strong effort to place the known facts in their true perspective in so far as they have been or are likely to be of value to the human race.

The lectures of greatest interest to medical practitioners will be: "The Prevention of Simple Goitre as a Public Health Problem" (Marine), "The Necessity of Education in the Control of Cancer" (Wood), "The Absolute and Relative Value of Laboratory Procedures in the Diagnosis of Tuberculosis" (Baldwin), "Heliotherapy in the Treatment of Tuberculosis" (Lo Grasso).

Then there are a number of lectures of utmost interest to public health officers and hygienists. Such are: "The Present Status of Industrial Toxicology in the United States" (Alice Hamilton), "Some Problems in Rural Hygiene" (Sears), "Industrial Housing and Public Health" (Adams), "William Farr, the Father of English Vital Statistics" (Newsholme). Other lectures are on hookworm infestation, pellagra and some of general interest as "Body Build and Longevity," "Constitutional Types in Relation to Disease" and on "The Problem of Motor Vehicle Accidents."

The general trend, where the question has been discussed, is in favour of the appointment of full time health officers. Herein lies efficiency and this is the only way to gain the confidence of the public and the respect of the medical practitioner for the official positions.

At the end of each lecture is a list of references or bibliography considered. The whole is a worthy collection of lectures and can be highly commended to all for their general interest and to hygienists particularly.

[1] "The de Lamar Lectures, 1925-1926, of the School of Hygiene and Public Health, Johns Hopkins University," Edited, with an Introduction, by W. H. Howell; 1927. Baltimore: The Williams and Wilkins Company. Royal 8vo., pp. 226, with illustrations. Price: $5.00 net.

RECENT WORK IN ULTRA-VIOLET RADIATION.

E. K. RUSSELL and W. K. RUSSELL in their recent publication "Ultra-Violet Radiation and Actinotherapy" have presented us with a treatise which gives a brief but fairly general review of the recent work done in ultra-violet radiation.[1] The short chapters entitled "Historical" and "Radiant Energy" are a useful introduction to the subject for anyone taking up actinotherapy for the first time. The types of lamps at present on the market for the production of artificial ultra-violet light are discussed in detail and the advantages of the different types are mentioned and plates shown.

The description of the chemical, physical and biological properties of this form of radiation gives some idea of the experimental work that is being undertaken in connexion with this subject, and how varied are the effects of these rays.

The chief interest in the subject for the actinotherapist lies in the question of technique and the type of condition to be treated and to these matters half of the work is devoted. Although not so extravagant in its claims as are many other books dealing with the same subject, we nevertheless feel that the actual cases in which definite results have been obtained are more limited in number than a casual survey of these chapters might indicate. However, this to a certain extent is unavoidable as the subject is more or less in an experimental stage. The book written by two general practitioners who obviously use the light therapy very extensively in their practice, is a valuable addition to the literature dealing with recent knowledge of this subject.

A BOOK FOR MALE NURSES.

A USEFUL BOOK published last year and now in its second edition is "Practical Nursing for Male Nurses in the Royal Army Medical Corps and other Forces," by Colonel E. M. Hassard, A.M.S. (Retired), and A. R. Hassard.[2] The book is intended for all male nurses and deals well with practical hints upon the medical, surgical and mental nursing of patients. There is a good table of contents with good extended chapter headings. The thirty-seven chapters deal in a practical manner with most of the subjects required by a male nurse. The essentials of cleanliness and tidiness are described with a minuteness of detail that shows a close acquaintance with the subject. An additional chapter upon radiant heat, electricity and massage appears in this edition. A description of rubber gloves, their uses and sterilization might well be added in a subsequent edition. The index is good, but could be more extensive. For example carron oil appears in the index and in the text, but not so picric acid although it is mentioned at least twice. Primarily written for the orderlies of the Royal Army Medical Corps, this book should prove helpful to other male nurses wherever they may be.

[1] "Ultra-Violet Radiation and Actinotherapy," by Eleanor H. Russell, M.D., B.S. (Dunelm), and W. Kerr Russell, M.D., B.S. (Dunelm), with forewords by Sir Oliver Lodge, F.R.S., D.Sc., LL.D., and Sydney Walton, C.B.E., M.A., B.Litt.; 1925. Edinburgh: E. and S. Livingstone. Demy 8vo., pp. 262, with illustrations. Price: 10s. 6d. net.

[2] "Practical Nursing for Male Nurses in the R.A.M.C. and Other Forces," by Colonel E. M. Hassard, A.M.S. (Retd.) and A. R. Hassard; Second Edition; 1927. London: John Bale, Sons and Danielsson, Limited. Post 8vo., pp. 423. Price: 4s. 6d. net.

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Development.

IN 1868 the total membership of the British Medical Association was smaller than the present membership of the Branches in Australia. During the following forty-three years the growth of the Association has been steady and regular. In 1908 the number of members was seven times the figure of 1868; calculated as an annual increment it averaged approximately 15%. In 1914 there were 2,507 members of the six Branches of the Association in Australia; in 1927 the official figures aggregate 4,000. This increase of fifteen hundred in the course of thirteen years is equivalent to an annual increment of approximately 8%. The figures are astounding. In 1926 there were 16,363 members in England, 3,122 members in Scotland, 1,100 members in Wales and Monmouthshire and 967 members in Ireland. The rate of increase in Australia is gaining steadily. In the not distant future the strength of the Australian Branches will be very considerable not only relatively, but also in actual numbers. With an institution of this size it is of paramount importance that its activities should be developed rapidly and that strenuous efforts should be made to exploit every avenue for the fulfilment of its objects. It is now nearly six years since the parent body altered the Articles of Association and By-laws to enable the overseas Branches to become incorporated under a memorandum of association identical with that of the parent body. By this means the Branches would gain greater autonomy without loss of the rights and privileges of Branches of the British Medical Association. The new Articles further provided for the formation of Federal Councils representative of the Branches in any area outside the United Kingdom "defined and approved" by the Council. The Federal Councils may be incorporated. Their function is to carry out the objects of the Association on behalf of the Branches collectively within the defined areas.

At the present time the Branches enjoy a considerable amount of freedom of action and have control of their own management within well-defined limits. Those that have taken advantage of the right to become incorporated under the local *Companies Acts*, have almost complete autonomy They can do all those things that the British Medical Association can do, but the approval of the Council is necessary before changes of the Memorandum or Articles of Association can be effected. This is the essential condition of inclusion in the great association. At first sight it might be held that the necessity to refer proposed alterations of this kind to the Council is a disadvantage, but it must be remembered that it is highly undesirable for any body to alter its constitution without mature consideration and some persisting reason. The necessity thus becomes a safeguard against hasty and ill-considered action. It should be a rare event to amend either the Memorandum or the Articles of Association. In all other respects an incorporated Branch can make its own by-laws and regulations and can manage its own affairs provided that everything is done in accordance with its recognized constitution.

An incorporated Branch is competent to carry out the objects of the Association, but in view of the fact that it is still a Branch of the British Medical Association, it is subject to the control of the Representative Body in so far as the decisions of the last named body have special reference to overseas Branches. It is improbable that the Representative Body will at any time ask the incorporated overseas Branches to adopt any special policy, unless this policy is acceptable to the overseas Branch concerned. On the other hand the overseas Branches receive invaluable support from the Association whenever they care to submit motions involving important principles for confirmation by the whole Association. The position of an incorporated overseas Branch is therefore highly satisfactory, since it enjoys almost complete autonomy and at the same time the backing of an Empire-wide organization.

The present position of the Branches of the British Medical Association in Australia is not quite satisfactory. Some have sought incorporation; others are seeking incorporation; one at least

has made no move toward this end. Since the year 1911 the six Branches have appointed delegates to the Federal Committee of the British Medical Association in Australia in order that collective action might be taken in connexion with matters affecting two or more Branches. The Federal Committee has no powers of initiation and is not a body of general reference. It coordinates the decisions of the Branches and by ascertaining the views of the majority of these Branches, determines what is the policy of the Branches in Australia. The function carried out by the Federal Committee is an important one, but it is necessarily a somewhat clumsy machine, moving slowly and in a limited number of directions. If a Federal Council were established, it would be endowed with more elastic executive powers and would stand in the same relation to the six Branches in Australia as the Council stands to the Divisions and Branches of the Association. There is no counterpart of the Representative Body in Australia, a body elected by democratic vote with full power to determine the policy of the Association. In the absence of such a body, the policy of the Branches of the Association in Australia is ascertained in two stages. The Branches have to consider the matters at issue individually. Any member can bring up any subject he pleases by giving notice of motion. The matter is then discussed at a general meeting of the Branch and if the motion be carried by the necessary majority, the decision is binding on the members of that Branch. If the matter is one of general application, the Branch may refer it to the Federal Committee, in which case the other Branches are requested to consider the matter, to define their attitude by means of a vote at a general meeting and to instruct their delegates to convey the decisions to the Federal Committee. If a Federal Council were in existence it would probably have wider powers, including those of initiation; it would not only coordinate the resolutions of the several Branches, but would deal with matters of common concern through the agency of standing committees. It would not be competent for the Federal Council to establish a principle or policy unless the Branches had already considered the matter, but the Council of the Association is not the governing body and has merely executive powers.

There are many difficulties to be overcome before a representative meeting could be instituted in Australia. At the present time some of the Branches have formed or have recognized local bodies or societies. These bodies are known by various names. They have no part in the constitution of the British Medical Association and no member of a Branch can be compelled to join the local body. The nearest approach to a representative meeting yet devised in Australia is the meeting of the delegates of the local associations with the Council of the New South Wales Branch. No meeting of delegates of local societies, however, can determine the policy of the Branches of the British Medical Association in Australia, since these bodies have no place in the constitution of the Association. It would be destructive to the freedom of action of the Branches if Divisions were formed within the Branches, for a Division is a self-contained unit and could exercise some of the right now enjoyed by the Branches. If the areas of the six Branches were partitioned and Divisions were formed, it would be possible to constitute a body composed of representatives of the several Divisions to determine matters of policy and to use a Federal Council as its executive body. If this expedient be not adopted, the Branches will have to act independently as heretofore, but it would be a material gain if the coordinating body could acquire more executive power and if machinery were created to provide for continuity of action between the meetings of the body. The cost of the establishment of a permanent secretariat and of standing committees would be considerable, but by no means prohibitive.

Current Comment.

BILIRUBIN AND JAUNDICE.

THE endothelial cells of the splenic sinuses and the Küpfer cells of the liver are phagocytic for red blood corpuscles and these endothelial cells are known as the reticulo-endothelial system. These cells also have the power of converting hæmoglobin into bilirubin. It is, however, held that the pigment is still linked with a protein until it is acted on by the parenchymatous cells of the liver. When

Van den Bergh based his well known test on Ehrlich's diazo reaction, he came to the conclusion that these two forms of bilirubin are essentially different. When the pigment is still combined with protein, it gives the indirect reaction and when it is finally dissociated from the protein, it gives the direct reaction. In obstructive jaundice some of the completely separated bile pigment is absorbed into the blood stream and in these circumstances the serum yields a direct reaction. When blood destruction in the reticulo-endothelial system has been excessive, the parenchymatous cells of the liver cannot deal with all the bile pigment which is formed. When this combined form of pigment passes into the blood the serum yields the indirect reaction. An excellent account of the evolution of the present day views on jaundice will be found in an article by Maud and S. O. Cowen in THE MEDICAL JOURNAL OF AUSTRALIA of February 21, 1925. These observers drew attention to the fact that all the data on which the modern conception of jaundice rests are by no means satisfactorily established. For example it has not been definitely settled whether bilirubin can be formed when the liver is completely excluded from the circulation. This question has been discussed in these columns in the issues of March 8 and August 9, 1924.

Thomas B. Magath and Charles Sheard have recently applied the spectrophotometric methods of analysis to blood serum and have made some observations which are of great interest and which lend themselves to further exploitation.[1] Samples of blood were taken under conditions which were carefully designed to avoid hæmolysis. The percentage transmission through the solution to be tested of light of a given wave length is compared with the percentage transmission through the liquid in a standard cell. The percentages are recorded on a calibrated drumhead. Curves were made with the serum of persons who were normal as far as the absence of jaundice was concerned, persons suffering from pernicious anæmia, hæmolytic jaundice, obstructive jaundice and malaria. The type of curve in all cases was the same. The curves were exactly like those given by bile and are regarded therefore as corresponding to the result of spectral analysis of bilirubin. The difference was one only of amounts. If arbitrary units are devised to show the comparative amounts of bilirubin in the serum and if the low normal content is taken as one, deep jaundice may be represented as from thirteen to seventeen units. The order of ascent from the normal level is first slight anæmia and nervous exhaustion, then malaria, pernicious anæmia, hæmolytic icterus and finally destructive jaundice or intense jaundice without obstruction of the biliary passages. Magath and Sheard refer to the findings of many workers who noted differences between "obstructive" and "hæmolytic" bilirubin. Among these may be mentioned Adler and Strauss who considered that the colloid nature of the serum was responsible for the difference. Andrewes offered evidence to support the view that the hæmolytic type was identical with hæmatoidin and that the real difference between obstructive and hæmolytic bilirubin lay in a difference in physical state, the latter possibly being a fine suspension instead of a solution. Magath and Sheard find that the results of spectral analysis of serum from normal persons and of serum from persons with jaundice from various causes are alike. In all their work they treated the serum with an alcohol and acetone mixture before the analyses were made. In order to prove that by this process any differences between the types of bilirubin were not destroyed, they examined specimens before the addition of alcohol and obtained identical results. They conclude that while it is evident from the results of the Van den Bergh tests that there are some differences in specimens of bilirubin possibly in their physical state or in the nature of a loosely combined state, fundamentally the substance is one and the same "whether it results from so-called obstructive or hæmolytic causes" and the common source is the erythrocytes. The small amount of bilirubin always present in the body represents the daily breakdown of erythrocytes in the tissues. The rate of excretion varies with the emptying of the gall bladder and the normal activity of the liver. Retention of bilirubin may be due to too rapid destruction of erythrocytes or to too slow a rate of hepatic excretion. Retention of bilirubin in obstructive jaundice is obviously to be explained by the mechanical blockage. It is conceivable that this may result in increased destruction of erythrocytes owing to the hæmolytic action of bilirubin and bile salts and secondary anæmia is frequently seen in the presence of jaundice. In hæmolytic jaundice there is first of all an inherited fragile erythrocyte. Breaking down occurs more easily and jaundice results. The jaundice in turn increases the breakdown and a vicious circle is thus produced.

An hypothesis advanced by Magath and Sheard on these grounds in regard to pernicious anæmia is of interest. They think that owing to some cause, perhaps infection, rapid erythrocytic destruction is started in the body, the resulting increase in the bilirubin in the blood creates further destruction and the vicious circle is established. According to this view any method of draining the liver or causing a greater outflow of bile would be beneficial. This has sometimes been noted in treatment.

The conclusion reached by Magath and Sheard is that fundamentally all jaundice is hæmolytic. This statement merely carries their work to its logical conclusion. They refer to "so-called" obstructive jaundice. Even if it be granted that the breaking down of erythrocytes is the first step in the formation of bilirubin and consequently of bile and jaundice, mere mechanical blocking of the common bile duct, as for example by a hydatid cyst, will result in jaundice. For this reason the term obstructive jaundice may well be retained. At the same time Magath and Sheard have shown that the spectrophotometric method of examining blood will yield useful information. We refrain from commenting further on this work until further studies by these authors appear.

[1] *Archives of Internal Medicine*, February 15, 1927.

Abstracts from Current Medical Literature.

DERMATOLOGY.

Oidiomycosis of the Nails.

J. A. SCOTT (*British Journal of Dermatology and Syphilis*, March, 1927) describes a case of nail infection in a nurse due to a yeast-like organism—an oidium. The disease which attacked the middle third of the affected nails, was characterized by the appearance of greyish-yellow patches under the nails. The patches were only slightly raised and thickened. There were no lesions on the fingers. Scrapings were treated with 30% caustic potash and stained by Gram's method. Colonies of the same yeast grew in five or six days after being planted on Sabouraud's glucose agar medium. A blood serum agglutination test yielded no reaction. These oidiomyces in early cultures do not yield any mycelin nor do they ferment sugar, but in later subcultures the reverse happens. Treatment consists of removal of nails and painting with tincture of iodine or the application of benzoic acid in an ointment.

Acne Agminata: A True Skin Tuberculosis.

E. R. MALONEY (*Archives of Dermatology and Syphilology*, March, 1927) reports a case of acnitis in a man, aged fifty-four years. He discusses the histological and bacteriological findings and also comments upon the subject of tuberculides in general. The patient had been in good health until a few months before the onset of the disease. At the time of the appearance of the eruption on the face general malaise, weakness and fever were present and persisted for several weeks. The rash which attacked the hands, chin, forehead and cheeks, took a couple of weeks to develope. The lesions were of characteristic appearance. During the ten months that the patient was under observation, the lesions appeared in successive crops, this element taking on an average one month for development and involution. When they disappeared, they left depressed scars on the face, but left no pitting on the hands. Histological examination revealed that epitheloid cells, lymphocytes and giant cells were present. There were also some cells of the Langhans type. Some necrosis was also seen. The histological diagnosis was a mild or attenuated form of tuberculosis of the sebaceous glands, hair follicles and sweat glands with acne. Bacteriological examinations were made in one hundred specimens from excised nodules. No tubercle bacilli were found. Smears and cultures yielded no tubercle bacilli and animal inoculation did not result in the manifestation of tuberculosis. A tuberculin skin test yielded a "slightly positive" response. On the subject of tuberculides the author is inclined towards the view of Rist and Rolland. These observers conclude that tuberculides are manifestations of allergy in subjects in whom there is a manifest or latent focus of tuberculosis, that the bacilli are destroyed *in situ* by antibodies and that the tuberculides are caused by an endogenous reinoculation.

Chronic Erythema of the Legs.

G. H. PERCIVAL AND C. P. STEWART (*British Journal of Dermatology and Syphilis*, March, 1927) draw attention to the increasing prevalence of vasomotor disturbances of the cutaneous vessels of the lower extremities. The condition is characterized by a bluish red coloration of the skin which appears to be œdematous, but does not pit on pressure. *Cutis anserina* is apparent and a prominent feature is the low surface temperature of the parts affected. As a rule the flabby, inactive type of individual is attacked. There appears to be a contraction of the arterioles and a dilatation of the capillaries and venules due to some derangement of the nervous mechanism. Various hypotheses have been suggested as being at the root of this derangement such as constitutional defect, exposure to cold, endocrine dysfunction, absorption of toxic bodies. The authors have discussed the hypocalcæmic hypothesis. They state that there is no deviation from the normal of the serum calcium content either in this condition or that of *erythema dermis*. It is stated that the amount of calcium salts usually prescribed in the treatment produces no increase in the blood calcium. When the blood calcium has been increased by the administration of parathyreoid extract, no amelioration of the symptoms has been observed.

Chondro-Dermatitis Nodularis Chronica Helicis.

A. C. ROXBURGH (*British Journal of Dermatology and Syphilis*, March, 1927) describes a case of painful nodular growth of the ear which he suggests is probably not so rare as the literature would suggest. The patient was a man, aged forty-nine years. The nodule which was situated at the highest point of the full edge of the helix of the right pinna, had been present for five years. It was so painful that he was not able to sleep on the right side. Two applications of radium had been tried with no effect. The nodule was excised under local anæsthesia. Microscopical examination of sections revealed a parakeratotic plug covering an ulcer which extended through the greatly thickened prickle-cell layer. The cartilage was affected by perichondritis and fibrillation of the matrix with definite degeneration in one place. It is not known whether this chronic inflammatory process starts in the epidermis, dermis or cartilage.

Pityriasis Rosea.

R. S. WEISS, C. W. LANE AND W. A. SHOWMAN (*Archives of Dermatology and Syphilology*, March, 1927) give a critical study of three hundred and eighty cases of *pityriasis rosea*. The age incidence of the disease was highest, that is 56·6%, between the ages of ten and thirty years. The disease occurred most frequently in the female in the proportion of two to one. The seasonal incidence was highest in spring and autumn months. The primary patch was noticed only in 27% of cases and it occurred most frequently on the anterior thoracic wall. Most of the lesions were of the macular or plague type, but in twenty-six the papules predominated. In two cases of the series vesicle formation was evident. As far as distribution is concerned almost any part of the skin may be involved although the trunk is usually the site of lesions. It has been reported on the scalp and penis and it has been observed localized to the axillæ and groins as in the *pityriasis cerciné et marginé* of Vidal. Itching was present in 26% of patients and severe in forty-eight of the series. Palmar or plantar lesions occurred in seven instances. In the differential diagnosis seborrhœic dermatitis and the disseminated plague type of parapsoriasis must be considered.

Ultra-Violet Light in Urology.

G. P. BENTEL (*The Urologic and Cutaneous Review*, March, 1927) discusses the treatment of certain skin conditions that come under the observation of the urologist. In *pruritus ani* and *pruritus vulvæ* the author states that twelve to fifteen exposures to ultra-violet light afford permanent relief. He starts with three exposures during the first week, two during the second week and thereafter one exposure a week. It is maintained that only the true pruritus which is claimed to be of bacteriological origin, should be treated by this method. In *herpes genitalis* that tends to become prolonged or to recur, the author has had good results with light therapy. Ten patients with epididymitis were cured by three applications of ultra-violet light.

UROLOGY.

Treatment of Vesical Tumours.

H. MEIER (*Zeitschrift für Urologie, Band* XX, *Heft* 11, 1926) divides vesical tumours into two groups according to the method of implantation of the growth into the bladder wall, papillary tumours with a narrow base and no infiltration and those with a broad base and solid infiltration. Of the former class there were twenty-six papillary tumours which were treated by excision. Six of these were found to be malignant. There was a mortality of 23% and a similar percentage of recurrences. Half the patients remained free from recurrence for periods varying from three to twelve years. Fourteen tumours with definite infiltration were treated either by excision or palliative operation. None of the patients remained without recurrences and all died within a short period. The author advises plugging

of the wound for several days as the best method of controlling hæmorrhage. The tampon was also used when the ureter was injured and was superior in its results to making a new ostium in the bladder wall.

"Neosalvarsan" Treatment of Cystitis.

A. MARCHIONINI (*Zeitschrift für Urologie, Band* XX, *Heft* 11, 1926) has treated seventy-four patients suffering from acute and chronic cystitis and pyelitis with intravenous doses of "Neosalvarsan." Fifty-seven were completely cured and in seventeen treatment was a failure. Improvement was noted most in cases of gonorrhœal cystitis, pyelitis and many forms of colon bacillus infection. Tuberculous cystitis was not affected. According to the age and general health of the patient the dosage employed was 0·15 gramme with a gradual increase to 0·45 gramme. Three to five days elapsed between injections and the course consisted of five doses. If this did not prove successful, the treatment was stopped and local measures were adopted. The only contraindication was cardiac insufficiency. Fever and local pain rapidly disappeared.

Ureteral Calculi.

A. ROTHSCHILD (*Deutsche Medizinische Wochenschrift*, November 12, 1926) describes a bloodless method of removing calculi from the ureters. He gives details of three cases in which calculi were removed without operation. After the urethra has been anæsthetized with "Novocain," the bladder is filled with one hundred and fifty to two hundred cubic centimetres of boric acid solution, the ureters are catheterized and the site of the stone is localized. One to two cubic centimetres of sterile olive oil are then injected. In all cases the stone was passed naturally on the following day. The author finds that surgical operation is still necessary in the presence of infections and for those stones causing definite obstruction, especially if the block be complete. But for all other calculi this treatment has the great advantage of allowing the patient to resume his work at once.

Perineal Prostatectomy.

F. HINMAN (*Californian and Western Medicine*, August, 1926) considers that his own modification of Young's perineal prostatectomy has given entirely satisfactory results. He concludes that in the hands of a specialist the perineal method gives a lower mortality rate than the suprapubic and that with his own method all defective functional results are avoided. The chief point of difference from Young's operation is that the recto-urethralis muscle is not severed but is pushed aside, usually to the left. This insures that the region of the sphincter of the membranous urethra is left uninjured. Urinary continence after prostatectomy is dependent on the integrity of this sphincter. The separable space between the right *levator ani* and the fascia of Denonvillier covering the right lobe of the prostate is now opened up by blunt finger dissection. The prostate is levered into view by means of a long transurethral prostatic tractor and an inverted V-flap is cut in the posterior surface of the prostate exposing the posterior urethra and the glandular enlargement surrounding it. The latter may now be enucleated *en masse* as in the Young method. The author has had a mortality of only 2% to 3% and a complete functional cure of the urinary disturbances in 95%. There has been no case of persistent fistula or incontinence of urine.

Urological Causes of Abdominal Pain.

J. D. BARNEY (*Boston Medical and Surgical Journal*, July 15, 1926) says that it is not yet fully appreciated how frequently abdominal pain may be due to some lesion of the kidney or ureter. Even if the pain appears to be directly or indirectly connected with the appendix, gall bladder or alimentary tract or with the female pelvic organs, yet the ureter and kidney cannot absolutely be excluded as the point of origin. Nor is the latter suspicion necessarily excluded even in the face of a normal urine and a normal radiogram. The urologist by special means at his disposal can determine with an error of only about 4% whether the urinary tract is culpable or innocent. The experience of the author has been that in 15% to 20% of lesions of the kidney and ureter some previous operation or operations were performed without relief for other supposed abdominal lesions. Closer cooperation between the general surgeon and the urologist is therefore desirable. Cystoscopy with catheterization of the ureters and functional tests may reveal nothing, but when a pyelogram and ureterogram are made, unexpected results are often obtained, for the film may demonstrate some form of ureteric obstruction. The more common lesions are stricture of the ureter, kinking of the ureter either arising congenitally or by pressure from abnormal renal vessels or from ptosis of the kidney and finally abnormalities of the kidney, renal pelvis or ureter such as horseshoe kidney and bifurcation of the ureter. The pyelogram need not necessarily reveal dilatation of the ureter or pelvis above the point of obstruction in order to clinch the diagnosis, for it is in the early stages, before dilatation has occurred, that the pain is greatest.

A New Ureteral Dilator.

R. A. DOURMASHKIN (*Journal of Urology*, May, 1926) describes a tunnelled ureteric bougie with a rubber bag end for dilating the ureteric lumen and the vesical orifice of the ureter in cases of calculi impacted in this canal. As is well known, thorough dilatation of the ureter below an apparently tightly impacted calculus will often lead to ultimate expulsion of the stone. The small rubber bag is securely tied over the end of the tunnelled bougie. After this has been passed up the ureter as far as it will go, it is inflated with water injected through the bougie. Occasionally the stone may be pushed up by the bougie and the end of the latter is passed through the constricted portion of the ureter which is now thoroughly dilated.

Surface Tension of the Urine in the Application of Hexyl-Resorcinol.

V. LEONARD AND M. FROBISHER (*Journal of Urology*, January, 1926) have noted that although hexyl-resorcinol is a powerful urinary disinfectant whether the urine be acid or alkaline, yet when sodium bicarbonate was being given in large doses at the same time, the bactericidal power of the hexyl-resorcinol was greatly diminished. This is due to the fact that sodium bicarbonate raises the surface tension of the urine, a condition unfavourable to the diffusion of any antiseptic through the cell membrane of the germ. This physical phenomenon must occur before the actual chemical reaction between the germ protoplasm and the surrounding antiseptic can be effected. Billiard has shown that by lowering the surface tension of a solution of sugar the rate of diffusion of water through a semi-permeable membrane surrounding the sugar solution is greatly increased. Applying this principle to disinfection *in vitro*, one of the authors has shown that lowering the surface tension of an antiseptic solution increases its bactericidal power. By means of the surface tensiometer of Compte du Nuoy the effect of certain substances on the surface tension of normal urine was studied. Hexyl-resorcinol itself was found to be a very powerful surface tension reducent, being practically equivalent to sodium oleate which is one of the most powerful of such agents commonly employed. The powerful bactericidal action of hexyl-resorcinol is no doubt largely dependent on this physical property, in addition to its particular chemical action on the germ protoplasm. Sodium bicarbonate on the other hand distinctly raised the surface tension of normal urine. Dilution of the urine, as occurs in practice with the common method of "forcing fluids," was found to raise the surface tension to an astonishing degree thereby defeating the medical attendant's object when an antiseptic was simultaneously administered. In using hexyl-resorcinol the authors have formulated the following rules: (i) the dosage must be adequate (0·6 gramme three times a day), (ii) the fluid intake must not be increased, (iii) sodium bicarbonate must be avoided and (iv) the course of treatment must be uninterrupted and sufficiently prolonged. The most resistant group of germs is that of the coliform bacilli, especially in chronic infections and when these organisms are present from sixty to ninety days continuous treatment is required with the above-mentioned dose.

British Medical Association News.

MEDICO-POLITICAL.

MEETING OF THE FEDERAL COMMITTEE.

A MEETING OF THE FEDERAL COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION in Australia was held on April 27, 1927, and 28, 1927, at the Medical Society Hall, Albert Street, East Melbourne, SIR GEORGE A. SYME, K.B.E., the Chairman, in the chair.

Representatives.

The following representatives of the Branches were present:

New South Wales Branch: Dr. R. H. Todd, Dr. J. Adam Dick, C.M.G.
Victorian Branch: Sir George A. Syme, K.B.E., Dr. R. H. Fetherston.
Queensland Branch: Dr. W. N. Robertson, C.B.E., Dr. D. Gifford Croll, C.B.E.
South Australian Branch: Dr. H. S. Newland, C.B.E., D.S.O., Dr. Bronte Smeaton.
Tasmanian Branch: Dr. E. Brettingham Moore.

Apologies for non-attendance were received from Dr. F. A. Hadley and from Dr. D. D. Paton, representing the Western Australian Branch and from Dr. Gregory Sprott, representing the Tasmanian Branch. Dr. Newland was asked to act as proxy for Dr. Hadley and Dr. Todd for Dr. Paton.

Appointment of Office Bearers.

On the motion of Dr. W. N. Robertson, seconded by Dr. H. S. Newland, Sir George Syme was re-elected Chairman.

On the motion of Dr. B. Smeaton, seconded by Dr. H. S. Newland, Dr. W. N. Robertson was reappointed Vice-Chairman.

On the motion of Dr. W. N. Robertson, seconded by Dr. D. G. Croll, Dr. R. H. Todd was reappointed Honorary Secretary and Honorary Treasurer. On the motion of Dr. R. H. Todd, seconded by Dr. W. N. Robertson, Dr. W. H. Crago was reappointed Honorary Auditor.

DR. J. ADAM DICK asked the members of the Committee to record their appreciation of the valuable services rendered to the Committee during the course of many years by Dr. J. Lockhart Gibson. The motion was seconded by Dr. E. Brettingham Moore and was carried unanimously.

Financial Statement.

The financial statement of the Federal Committee duly audited by the Honorary Auditor was received and adopted.

Correspondence.

Expenses of Members of the Federal Committee.

A letter was read from the Tasmanian Branch calling attention to the expenses of members attending meetings of the Federal Committee. It pointed out its position as a small and distant Branch in respect of the expenses of its representatives as compared with that of a larger and nearer Branch.

It was resolved that owing to the exceptional position of the Tasmanian Branch the travelling expenses of one representative attending the meetings should be paid by the Federal Committee.

It was further resolved that the Branches be asked to consider whether it would be desirable to appoint only one representative to the Federal Committee.

Centenary Celebrations of the Birth of Lord Lister.

The Honorary Secretary reported that the Federal Committee had been invited by the Royal Society to nominate a delegate to represent Australia at the centenary celebrations of the birth of Lord Lister in London on April 5, 1927. On the instructions of the Chairman he had communicated with several Branches and had received replies nominating Mr. R. Hamilton Russell to act as the representative. Mr. Hamilton Russell had accepted the nomination and the Royal Society had been advised of the fact.

Ships' Surgeons.

Correspondence was read between the Federal Committee and Dr. D. E. Fenwick, Honorary Secretary of the New Zealand Branch of the British Medical Association, concerning the suggestion that passenger ships sailing be-

FEDERAL COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION IN AUSTRALIA.

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE SIX MONTHS ENDED DECEMBER 31, 1926.

RECEIPTS.	£ s. d.	£ s. d.
To Balance at June 30, 1926—		
Government Savings Bank of New South Wales	502 19 11	
Cash on hand	1 6 2	
	504 6 1	
Less Union Bank of Australia Limited—Overdraft	11 18 0	
		492 8 1
„ Branch Contributions		378 10 10
		£870 18 11

PAYMENTS.	£ s. d.	£ s. d.
By Travelling Expenses		54 2 2
„ Sundry Expenses		34 0 7
„ Balance at December 31, 1926—		
Government Savings Bank of New South Wales	£427 19 11	
Union Bank of Australia Limited	354 15 11	
Cash on hand	0 0 4	
		782 16 2
		£870 18 11

AUSTRALASIAN MEDICAL CONGRESS (BRITISH MEDICAL ASSOCIATION) ACCUMULATED FUNDS ACCOUNT.

RECEIPTS.	£ s. d.
To Balance at June 30, 1926—	
Government Savings Bank of New South Wales	282 7 2
	£282 7 2

PAYMENTS.	£ s. d.
By Clerical Assistance	3 15 0
„ Balance at December 31, 1926—	
Government Savings Bank of New South Wales	278 12 2
	£282 7 2

(Sgd.) ROBT. H. TODD,
Honorary Secretary.

Audited and found correct—
(Sgd.) W. H. CRAGO.
Honorary Auditor.

Sydney, April 14, 1927.

tween Australia and New Zealand should be required to carry ships' surgeons. Dr. Fenwick had informed the Committee that it was understood that a shipping bill would shortly be introduced into Parliament and that this mattter would receive attention. The correspondence was received.

Congratulations to Sir Thomas Goodwin.

On the motion of Dr. R. H. Fetherston, seconded by Dr. H. S. Newland, it was resolved to offer the congratulations of the Federal Committee to Lieutenant-General Sir Thomas Goodwin, K.C.B., C.M.G., D.S.O., on his appointment as Governor of Queensland. Sir Thomas Goodwin had in recent years held the position of Director-General of Medical Services in the British Army.

British Medical Association Scholarships and Grants.

The Honorary Secretary reported that the Federal Committee, in accordance with arrangements with the Council in London, had continued to cooperate with the Association in connexion with applications for scholarships and grants for post-graduate study and research.

Australasian Medical Congress (British Medical Association).

A communication was read from the General Secretary of the Second Session of the Australasian Medical Congress (British Medical Association), Dunedin, 1927, forwarding from the Executive Committee six resolutions adopted at sectional meetings and also some suggestions by the Honorary Treasurer of the Congress for improvement of the financial arrangements of Congress (see THE MEDICAL JOURNAL OF AUSTRALIA, April 2, 1927, pages 520, 521 and 522).

The consideration of these matters was postponed.

An invitation from the New South Wales Branch to hold the third session of Congress in Sydney in the spring of 1929 was read. It was resolved that the invitation be accepted.

National Health Insurance.

It was announced that arrangements had been made for a conference to be held between representatives of the Federal Council of the Australasian Pharmaceutical Conference and the Federal Committee to discuss certain matters in connexion with national health insurance. A summary of the discussions at the conference is given on another page. As a result of these discussions a letter was addressed to the Prime Minister, informing him that three resolutions had been adopted as follows:

(i) That this conference is of the opinion that in any national health insurance scheme adopted by the Government, such scheme should be controlled and administered solely by the Government.

(ii) That on any administrative board or committee appointed in connexion with national health insurance (medical benefits) adequate representation be given to medical practitioners and registered pharmaceutical chemists.

(iii) That a special subcommittee be appointed to confer with the Government on any matter concerning which the interests of the two bodies are jointly affected. The names of the members of the subcommittee are Sir George Syme and Dr. R. H. Fetherston and Mr. Frank Buckhurst and Mr. C. L. Butchers.

The two bodies recognized the paramount importance of the conservation of national health and asked the Prime Minister to give favourable consideration to the resolutions. Separate letters were sent by the Federal Committee and the Federal Council of the Australasian Pharmaceutical Conference.

Uniform Conditions of Medical Service in Public Hospitals.

At its meeting held on August 25 and 26, 1926, the Federal Committee appointed a subcommittee consisting of Sir George Syme and Dr. R. Fetherston to collate the material collected from the several Branches concerning the systems existing in the various hospitals in their respective States. The subcommittee submitted a report:

Report of Subcommittee.

At its first meeting the subcommittee coopted Dr. J. Newman Morris. The material supplied by the Branches and forwarded by the Honorary Secretary was collated, classified and summarized. A uniform classification was difficult as different classifications are adopted in different States, in some of which irregular classes exist not found in others, for example, in South Australia hospitals under the *Rating for Hospitals Act* and in Western Australia subsidized assisted hospitals under no act. In New South Wales and Queensland sanatoria for tuberculosis are classified as State hospitals, though in New South Wales the Queen Victoria Home for Tuberculosis is also classified as a public hospital. In Western Australia sanatoria for tuberculosis are called special hospitals. In Victoria some sanatoria are State institutions and some are not. In South Australia the sanatorium known as Kalyra is under a private trust and there is a tuberculosis "block" in the Adelaide Public Hospital.

Information regarding infectious diseases hospitals is indefinite and they are differently classified in different States. They are not specifically mentioned in the returns from New South Wales and Tasmania, but infectious cases are admitted to the Coast Hospital in New South Wales and infectious diseases hospitals exist at Hobart and Launceston, conducted by the municipalities. In Brisbane the Infectious Diseases Hospital is under the local authority; in Adelaide it is a branch of the Adelaide Public Hospital.

Maternity hospitals are classified under State hospitals in the return from New South Wales, but the Women's Hospital, Crown Street, Sydney, and the Royal Hospital for Women, Sydney, are called public hospitals. In Western Australia the maternity hospital is classified as special, but is under the Health Department. In Victoria maternity hospitals are classified as public hospitals.

Subject to these irregularities, the subcommittee adopted the following classification:

Class A—Public hospital.
Class B—State hospitals.
Class C—Private hospital (under E in Western Australia).
Class D—Intermediate hospitals.
Class E—Community hospitals.

The position may be summarized as follows:

Class A exists in all the States and are maintained in all States by Government grants, subscriptions and donations from the public and payments from patients in very varying degrees. Details were supplied by Queensland, Victoria and Western Australia only.

Class B exists in all States and is maintained by Government grant, but payments are taken from patients in all except hospitals under the Health Department of New South Wales.

Class C exists in all States and are supervised by the Health Department.

Class D exists in Victoria only and at present receives no Government grant.

Class E exists in no State.

As regards payments to honorary or visiting staffs in hospitals where payment is received from patients, the information supplied is indefinite. Apparently visiting staffs do not receive any payments in any State, except as salaried officers, whole-time or part-time, of institutions maintained by Government. No honorary medical officers are appointed in such State institutions except in New South Wales and in mental hospitals in South Australia. These honorary officers do not receive any payments from patients. In Victoria practitioners not on the staff of such State institutions are sometimes called in for consultation or operation and are paid fees for their services by the Government. In some public hospitals (Class A a, 2 and A b in South Australia and A b and e in Western Australia and a few country hospitals in Victoria) private or intermediate patients are admitted and pay fees to the medical officers who attend them. No information on this subject was supplied from New South Wales and Queensland. Generally with the above exceptions it may be

said that honorary or visiting staffs do not receive any payments, although patients pay varying sums to the hospital funds.

The subcommittee then considered the question of the policy that should be adopted. The supposed policy of the profession in Australia has been determined by the resolution passed by the Australasian Medical Congress at its meeting in Melbourne in 1908, that "no payment whatever should be taken from patients treated at hospitals maintained by the donations of the charitable and by Government grants." This resolution was reaffirmed at the meeting of the Congress in Sydney in 1911. The information supplied indicates that this policy has not been observed. In Victoria the *Charities Act*, 1922, in Section 73 provides:

> Every in-patient and every out-patient who is admitted into or maintained by or who receives relief from any registered institution, shall be liable to contribute towards the funds of the institution according to his means any sum in respect of such maintenance, attendance or relief as the committee demands not exceeding the actual cost of such maintenance, attendance or relief.

Conditions have changed since 1908. The subcommittee has adopted the following statement from a report on the subject adopted by the Council of the Victorian Branch:

> Medical knowledge has progressed so rapidly and to such an extent that the investigation and treatment of disease and injury has had to be specialized. Many general practitioners are no longer able to give personally full and adequate service to all their patients. They have not the necessary special knowledge and equipment or the time. They are compelled to cooperate with specialists who have. But the cost of such cooperation is often so great as to be almost prohibitive except for those in good financial circumstances.
>
> Modern public hospitals provide the necessary special services and cooperation most efficiently and conveniently. They have also been greatly improved in accommodation and comfort. The result is that people who are not in necessitous circumstances, do not hesitate to make use of the public hospitals and are also quite willing to pay something to the hospitals, though unable to pay for such services elsewhere. The provision of this excellent accommodation and service involves the hospitals in very greatly increased expenditure. To meet it their governing bodies are only too willing to receive payment from patients.
>
> The hospitals in consequence are serving a much larger proportion of and a different class of the community than formerly. The extent of the change in Victoria is shown by the following figures:

	1901.	1926.
The population was	1,400,000 ..	1,700,000
Hospital in-patients	25,358 ..	540,108
Hospital out-patients ..	74,080 ..	193,325
Contributions of in-patients	£9,843 ..	£94,787
Contributions of out-patients	£5,042 ..	£28,871

These figures indicate that the increased use of hospitals by patients who are not necessitous, is steadily growing. The individual number of out-patients attending the public hospitals in Victoria increased 60% in the last year. If the in-patient accommodation had been equally elastic, the increase in in-patients would have been probably proportional. In the opinion of the subcommittee efforts should be made to check the extent to which out-patient departments are used by patients able to pay. Owing to lack of information on this aspect however and the difficulties it presents, this aspect has not been sufficiently considered by the subcommittee to enable it to make suggestions.

In the opinion of the subcommittee, the policy adopted by the resolutions of the Medical Congress of 1908 and 1911 should be modified. It recommends that public hospitals may treat as in-patients those able to pay in whole or in part the cost of maintenance and treatment. It they do, then the medical staffs should receive payment for their services to those who pay, while continuing to treat gratuitously those unable to pay.

The subcommittee is of opinion that private hospitals also require standardization and that Health Departments should gradually withdraw licences from private institutions which do not fully conform to modern requirements.

The report was received.

In a discussion on the report it was pointed out that it was desirable for the Federal Committee to formulate a policy which could be adopted as the policy of the medical profession throughout Australia. Dr. R. H. Todd expressed the opinion that it should not be assumed that the resolution of the Australasian Medical Congress referred to in the report was a true expression of the view of the profession. Payments were received at some public hospitals for the maintenance of quite poor people who could not afford to pay for medical treatment. He referred to the decisions of the Representative Body of the Association in connexion with the methods of recognition of the services of visiting members of the medical staffs. The resolutions were as follows:

> When the board of management of a voluntary hospital enters into a financial arrangement with a public authority, an employer of labour, approved society, insurance company or under a contributory scheme or otherwise for the reception of patients, such arrangement should be taken to cover the cost of maintenance and medical treatment and a percentage of all such receipts should be passed into a fund which is at the disposal of the visiting staff of that hospital.
>
> Where the board of management of a voluntary hospital accepts contributions for patients from an approved society, insurance company, contributory scheme, employer of labour and/or by massed or periodical payments by employees, the members of the visiting medical staff should receive recognition of their services either in the form of an agreed honorarium or by means of a percentage of all such payments being passed into a special fund. Such honorarium or fund can be allocated in any manner which the visiting medical staff may determine.

He suggested that the policy of the Representative Body should be followed.

SIR GEORGE SYME stated that the opinion of the subcommittee was that if a payment were made by or for a patient, no matter what his financial status might be, part of that payment should be handed to a staff fund. He wished the principle to be established. He amplified the report by reading a suggested classification of hospitals. In the first place there were the public hospitals which should be reserved for the indigent. In the second place there were community hospitals. In community hospitals several classes of patients could be received. There were (*a*) private patients. The medical attendants would charge full fees to such patients. There were also (*b*) intermediate patients, (*c*) patients who were under a contributory scheme and (*d*) non-paying patients. Patients belonging to (*b*) and (*c*) would be required to make some payment for maintenance and treatment and the medical staff would receive a percentage of these payments.

After a full discussion Dr. Brettingham Moore moved and Dr. H. S. Newland seconded:

> That in public hospitals which treat as in-patients those able to pay in whole or in part the cost of maintenance and treatment, the medical staffs should receive payment for their services to those who pay, while continuing to treat gratuitously those unable to pay.

The motion was carried.

Friendly Society Lodge Practice.

Correspondence was read from the Queensland and South Australian Branches urging the Federal Committee to expedite the consideration of the proposed adoption of a model lodge agreement for the whole of Australia. At the suggestion of the Queensland Branch a conference between delegates of the Branches on the conditions of the proposed agreement had been held prior to the meeting. Sundry proposals for the variation of the New South Wales Common Form of Agreement had been submitted by the Western Australian, the Queensland, the South Australian and the Victorian Branches.

It was agreed that the New South Wales Common Form of Agreement should be taken as the basis for a

model agreement. The following amendments were approved. In the first clause the words "to terminate at the end of the quarter" were added, so that the agreement between the medical officer and the trustees of the lodge could be terminated by either party by giving three months' notice in writing that the agreement would terminate at the end of a given quarter. Clause 2 was amended by the inclusion of a provision that no candidate should be examined by a medical officer except for full benefits. In particular it would be stipulated that medical benefits would not be granted to honorary lodge members. It was determined that clause 6 should be deleted. This clause provides for the supply by the medical officer of medicines, surgical dressings, splints and so forth. It was thought that any contract to supply medicines and dressings should be separate from the contract to supply treatment. It was further determined that Clauses 11 and 12 be omitted and that a fresh clause be substituted, prescribing a minimum fee of five guineas for attendance on wives of members in their confinements. This fee would include remuneration for antenatal supervision. Clause 13 was amended by the addition of a sentence entitling the medical officer to a fee of ten shillings and sixpence for a consultation between him and another medical practitioner, when the consultation was held at the request of the member. In connexion with Clause 16 which provides for the giving of special services at prearranged fees, it was determined to have a schedule of fees for special services. This schedule would not be included in the model agreement.

In Clauses 17 and 19 night time would be defined as the period between six o'clock in the evening and eight o'clock in the morning. Clause 18 was amended by the addition of the words "other than minor surgical operations not requiring an anæsthetic." The clause provides that the fee to be paid for any surgical operation shall be a matter of arrangement between the member and the operating surgeon. A verbal amendment was made in Clause 19 to make it clear that a special fee would be payable for attendance requested and given between the hours of six in the evening and eight in the morning. In Clause 21 which deals with the transfer of a member from one lodge in one place to a lodge in another, the words "and such transferred member shall not be required to subject himself or his wife to examination by the medical officer" were elided. In Clause 27 the words "that is to say within fourteen days of the first day of January, April, July and October" were omitted. This has reference to the payment by the trustees of all sums due to the medical officer within fourteen days of the commencement of each quarter in each year.

In regard to the income limit clauses it was recognized that an increase of the income limits would entail a corresponding increase in the rates for attendance. The history of the changes effected in this respect in New South Wales was given. Sir George Syme referred to the fact that the Royal Commissioners on National Health Insurance had recommended that the compulsory provisions of the national health insurance fund should apply to all wage and salary earners over the age of sixteen years and that no mention was made of any income restriction. He thought that the medical profession should be determined to insist on the principle of a defined income limit. If it were fixed at a low figure, it might be regarded as an impossible condition as far as national health insurance was concerned and the recommendation of the Royal Commission might be acted on. Dr. D. Gifford Croll suggested that the income limit might vary with the basic wage, but it was pointed out that it would be too complicated to adjust the clause each time the basic wage was altered in every State. It was eventually moved by Dr. W. N. Robertson, seconded by Dr. R. H. Fetherston and resolved that the income limit on joining be not more than £312, but that if a member's income together with that of his wife exceeded £416 a year during the course of his membership, he should not be entitled to medical benefit.

In regard to the minimum rates for attendance it was agreed that the arrangement obtaining in South Australia should not be disturbed. This arrangement was that an unmarried member paid a certain rate and a married member paid an additional sum for each person dependent on him and entitled to medical benefit. In view of the fact that it had been decided to accept an increase of 20% in the income limit, an increase of the rate of the same proportion should be required. The Committee adopted the rate of thirty shillings for lodge members residing in the metropolitan areas. It was left to the Councils of the several Branches to fix the rates for attendance on members residing in places outside the metropolitan areas.

Finally it was resolved that the New South Wales Common Form of Agreement as amended be adopted as a model agreement for the whole of the Commonwealth. The Honorary Secretary was instructed to take steps to have the model agreement revised and put into legal form.

On the motion of Dr. R. H. Fetherston, seconded by Dr. W. N. Robertson, it was resolved that no member should be required to give treatment to a patient unless he brought with him his lodge prescription book.

Revision of the British Pharmacopœia.

At the invitation of the Medical Secretary of the British Medical Association the matter of the revision of the British Pharmacopœia had been referred to the Branches for consideration and report. In his letter Dr. Alfred Cox had drawn up five specific questions. These questions had been taken as the basis for an expression of opinion by the Branches. Replies had been received from the South Australian, Western Australian and New South Wales Branches. A short discussion ensued and it was resolved that replies be sent to the questions to the following effect. It was considered that the best method of adapting the British Pharmacopœia to Imperial uses would be to have one pharmacopœia for the Empire. In order that the overseas dominions might cooperate to the best advantage in the preparation of the British Pharmacopœia it was suggested that the advice of organized bodies, such as the Branches of the British Medical Association in Australia and the Australasian Pharmaceutical Conference and the Chief Medical Officer of the Government in the several States of Australia and the Dominion of New Zealand should be sought by the committee of the General Medical Council concerned in the preparation with the object of collecting information for use in compiling future issues. In regard to the question of the utility of the present edition, it was stated that it had been accepted as the standard in all States in Australia. It was thought that it would be useful if annual supplements were issued, so that innovations and modifications of standard tests and methods might be made available at short intervals. In the last place it was held that substances and preparations in daily use in tropical climates and in restricted parts of the Empire should be dealt with in the body of the pharmacopœia and not in a separate volume nor in an addendum to the main volume.

The Royal Visit.

It was announced that on the occasion of the visit of their Royal Highnesses the Duke and Duchess of York an address of welcome had been presented by the Chairman, Sir George Syme, on behalf of the Committee.

Next Meeting.

It was resolved that the date and place of the next meeting should be determined by the Chairman.

Votes of Thanks.

Hearty votes of thanks were extended to the Chairman, Sir George Syme, for the admirable manner in which he had conducted the meetings, to the Council of the Victorian Branch for having accommodated the Committee during its meeting and to the President and Council of the Branch for their hospitality in entertaining the members of the Committee at dinner.

CONFERENCE BETWEEN THE FEDERAL COMMITTEE AND THE FEDERAL PHARMACEUTICAL COUNCIL.

ON April 28, 1927, the members of the Federal Committee of the British Medical Association met the following members representing the Federal Council of the Australasian Pharmaceutical Conference for the purpose of discussing points of mutual interest in connexion with the national

health insurance scheme: Mr. F. P. Gulley (Perth), President of the Federal Council, Mr. C. L. Butchers (Melbourne), Honorary General Secretary of the Federal Council, Mr. H. D. B. Cox (Sydney), President of the Protected Articles Traders' Association of New South Wales, Mr. G. F. Musson (Sydney), Member of the Executive of the Master Pharmacists' Association of New South Wales, Mr. J. F. McKimm (Sydney), President of the Pharmacy Board of New South Wales, Mr. J. W. Cochrane (Melbourne), President of the Pharmacy Board of Victoria, and Mr. A. L. Jones (Melbourne), President of the Pharmaceutical Society of Victoria.

MR. F. P. GULLEY said that the national health insurance scheme had been under discussion for two or three years. In 1914 members of an organization had met the members of the Federal Committee and had discussed the same question. At that time they had been opposed to a national health insurance scheme. The Royal Commission had been sitting for three years and as a result it could be said that every party in Federal Parliament was pledged to national health insurance. His organization was convinced of the importance of the scheme being under the control of the Government. The friendly societies were making a strong effort to control the national insurance scheme. It would be a calamity if these bodies got the thin edge of the wedge in. He quoted from *The Pharmaceutical Journal* to illustrate the views of the pharmacists. They had evidence that the mutual friendly societies were pressing their claims strongly. From the brief accounts published in the daily papers of the report of the Royal Commission it was evident that the friendly societies were not in a position to handle the scheme. The cost of administering such a scheme by the friendly societies would be exorbitant. Mr. Gulley pointed out that in Melbourne 110,000 members of friendly societies resided in three districts, namely Caulfield, Malvern and Carnegie. The supply of medicine in these districts was in the hands of two registered pharmacists and a number of unqualified persons. An insurance scheme could not be conducted in that way. They had informed the Prime Minister that they would lend their support to a scheme if it were complete and workable. A board should be appointed with proper representation of each section concerned. They did not wish to interfere with the rights and privileges of the friendly societies.

SIR GEORGE SYME pointed out that the medical profession in Great Britain was strongly opposed to the control of national health insurance by friendly societies and the profession in Australia was equally opposed to it.

MR. F. BUCKHURST suggested that a letter should be sent to Senator Millen or to the Prime Minister to the effect that the national insurance scheme should be administered by the Government itself and that a board should be appointed with representation of all parties directly interested. He held the opinion that if the friendly societies got hold of the management of national health insurance, they would do everything in their power to exclude all other organizations. In addition to sending a letter the medical profession and the pharmacists should leave no stone unturned until they achieved their objects.

DR. W. N. ROBERTSON thought that the medical profession was in a stronger position than the pharmacists. They should endeavour to mould the minds of the legislators so that the attitude they were adopting might be understood. He thought that the drafting of a letter should be left to a subcommittee.

MR. F. BUCKHURST stated that when the Federal Pharmaceutical Council were discussing the matter in Perth, it had been realized that a great deal depended on the attitude of the body of pharmacists. A circular dated February 9, 1927, had been sent to every pharmacist in Australia. Each pharmacist had been asked to give an undertaking that he would adopt the procedure agreed upon by the Council. Nearly 50% of the pharmacists had replied. A further circular would be sent in order to get more returned. He advocated that the Federal Committee should take similar steps in order that the medical profession might be prepared.

SIR GEORGE SYME agreed that the medical profession should be asked to adopt a strong attitude in connexion with this matter.

MR. H. D. B. COX expressed the opinion that when national health insurance was introduced, the friendly societies would no longer be needed. Administration should not be handed to any outside body. It had been suggested that the friendly societies should have representation on the administrative board. They had witnessed the gradual growth of friendly societies and their renewed efforts to increase in strength. It was therefore necessary for them to oppose the inclusion of friendly societies in the scheme.

MR. F. P. GULLEY stated that a suggestion had been made to the Royal Commission that when a national health formulary was being devised, the Australian Pharmaceutical Formulary could be used as a basis for many preparations to replace a number of proprietary articles. He stated that once national health insurance had been introduced many of the formulæ included in the various hospital pharmacopœiæ would disappear.

MR. F. BUCKHURST presumed that the whole basis of medical work would depend on the nature of the national health insurance pharmacopœiæ. It seemed that the Royal Commission had made up its mind in this respect. A great deal of money could be saved by reducing the number of prescriptions and the money thus saved could be utilized for the better remuneration of those carrying out the scheme. If the prescriptions were limited to formulæ included in the pharmacopœiæ there could be a flat rate for dispensing.

The representatives of the Federal Pharmaceutical Council undertook to draft a letter to be sent to the Prime Minister and to submit the draft to the Federal Committee without delay. The conference then terminated.

NOMINATIONS AND ELECTIONS.

THE undermentioned have been nominated for election as members of the New South Wales Branch of the British Medical Association:

Figtree, Edward Richardson, M.B., Ch.M., 1925 (Univ. Sydney), Royal North Shore Hospital, St. Leonards.

Markell, Phillip Justin, M.B., Ch.M., 1925 (Univ. Sydney), 15, Onslow Avenue, Elizabeth Bay.

Moore, Brooke, M.B., Ch.M., 1924 (Univ. Sydney), Bathurst.

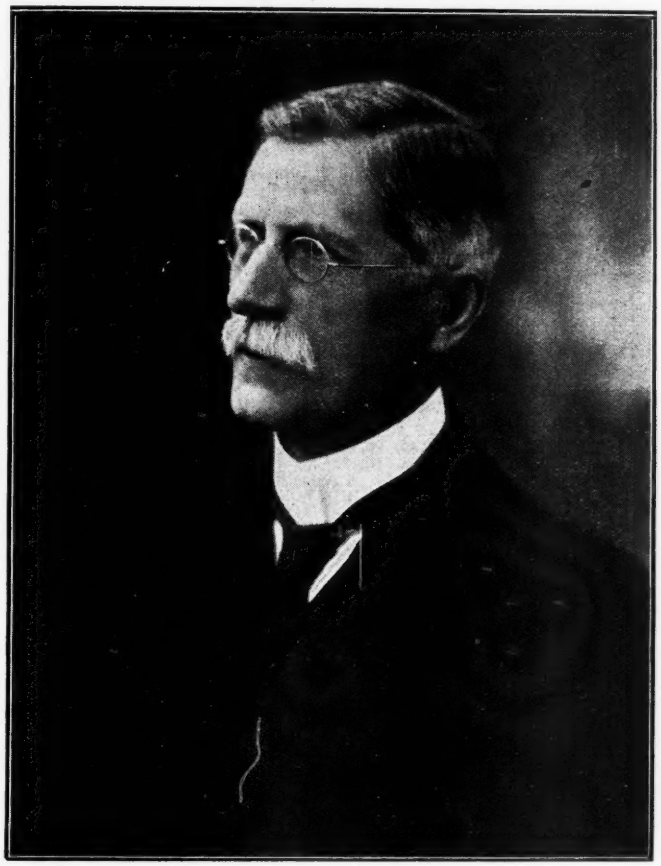
Obituary.

THOMAS HENRY FIASCHI.

ON April 17, 1927, a wise and cultured man passed into the Great Beyond, regretted by all, respected and beloved. His splendid physique and power of endurance tempted him to expose himself to unnecessary risks once too often. A few weeks ago, neglectful of the fact that advancing age reduces a man's resistance, he sought the vineyards he loved so well and made his bed of a sack under a metal roof. Nature took toll; a pulmonary infection followed and after a hard fight with alternating gains on both sides, he was beaten for the first and last time. His colleagues, friends and acquaintances look hopelessly at the empty chair, the vacant place. The man of whom Dr. Scot Skirving recently wrote that his boldness, his keenness and his general wealth of culture acted as a tonic, can no longer stimulate save through the influence of his useful life.

Thomas Fiaschi was born on May 31, 1853. He was the son of another celebrated Fiaschi, a Professor of Mathematics at the University of Florence. He spent his youth in Florence and then passed into the University. By the arrangement of interchange of students by the universities of Italy, he was able to divide his course between Florence and Pisa and thus gained the advantage of the wider teaching of two different schools. In 1877, when he was twenty-four years of age he secured the

double doctorate of medicine and surgery at each university. Almost immediately after his graduation he left Europe for Australia and took up residence in Cooktown in the north of Queensland where there was a considerable Chinese, but a small white population. He stayed but a short time in the north, but in the course of some eighteen months he found his measure and convinced his colleagues and his patients that he was a man of exceptional attainments, a pioneer. Although only twenty-five years of age, he manifested courage in his practice. Perhaps the most striking proof of his independence of thought at this stage was his introduction of the rectal route for the administration of quinine in patients with malaria. In 1879 he left Cooktown and on the advice of the late Normand MacLaurin he took up residence at Windsor on the Hawkesbury River, in New South Wales. It was here that he turned his attention largely to surgery and it soon became evident that his intimate knowledge of pathology and surgery combined with great manual dexterity placed him in the front rank of the surgeons of his day. He was appointed Honorary Surgeon to the Windsor Hospital soon after his arrival in the township and he retained this office until 1883, when he left the district to commence practice in Sydney. In 1894 he was appointed Honorary Surgeon to the Sydney Hospital. His colleagues on the staff were William Goode, William Chisholm and Alexander MacCormick. Among his assistants in the early days at the Hospital were Herbert Maitland, C. E. Corlette and H. Skipton Stacy. The value of his work can be gauged from his publications in various journals both in Australia and elsewhere. He joined the New South Wales Branch of the British Medical Association when it was formed in 1880 and he has remained an active member ever since. He was elected a member of the Council of the Branch at an early date. In March of 1888 he was elected Vice-President and a year later he stepped into the President's chair. On March 7, 1890, he delivered his address before vacating the chair. In the course of that address he chose to advocate a healthy inhibition to the activities of medical practitioners. Instead of working at high pressure in a more or less automatic way, he wished them to avoid overwork, to weigh their facts before they arrived at decisions and to learn from others. It is extremely doubtful whether he followed his own sound advice. Those who knew him in the earlier days remember his energy, his unflagging interest in his work, his solicitude for the welfare of all his patients, no matter what their social standing and his untiring effort to gain fresh knowledge and to impart it to his colleagues. His mind was an open one; versatility was a strong characteristic in his professional and his private life. Up to the year 1896 he conducted his private practice and lived at a house situated at the corner of Phillip Street and Bridge Street, where the architect's branch of the Board of Works is now housed. There was then as there is now no definite title to the land and in consequence the buildings on this site have been rather of the nature of makeshifts. In 1897 he moved to the house, number 149, Macquarie Street, where Anderson Stuart had lived. Later he moved to another house in Phillip Street.



In 1891 he obtained a commission in the New South Wales Lancers as Captain in the medical service. When war was declared between Italy and Abyssinia and matters were assuming a threatening aspect the Lancers were sent out and with the detachment Thomas Fiaschi sailed in a warship for the Red Sea. On arrival in north Africa he offered his services to the Italian authority. They were accepted and his knowledge and ability again stood him in good stead. For his valuable work he received the order of St. Maurice and St. Lazarus, 5th Class, Crown of Italy, 4th Class. An extremely interesting insight into his experience on active service with the Italian Army is to be found in an article published in two parts in *The British Medical Journal* in 1896 on the mutilations inflicted on the prisoners by the Abyssinians. The crudest amputations of the right hand and left foot and of the external genitals were carried out in barbarous fashion; Thomas Fiaschi witnessed the results of these cruelties and described them accurately and vividly. During his absence his position at the Sydney Hospital was filled, but soon after his return he again joined the staff. Alexander MacCormick found that his work at the Prince Alfred Hospital was claiming so much of his time and attention that he was glad to resign his position at the Sydney Hospital and thus to make room for Fiaschi. After the Abyssinian war was over he travelled to Italy and thence home through America. It was on this occasion that he witnessed the pioneering work of McBurney and others in the realm of abdominal surgery. The birth of aseptic surgery after antiseptic surgery had held sway for many years meant a second revolution. Thomas Fiaschi was quick to recognize its significance. Shortly after his return he deemed it to be his duty to translate the work of Bassini on hernia. Unfortunately for Australian surgery this translation was held unpublished for about two years. Eventually it appeared in the *Intercolonial Medical Journal*. Before this he had done some special work on the surgery of exophthalmic goître. In this field as in many others he was a leader in Australia.

When war broke out in South Africa in 1898 he was given the command of the No. 1 Field Hospital with the

New South Wales forces under General Hutton. It is common knowledge that Thomas Fiaschi gained distinction in the field. He was mentioned in despatches and for conspicuous bravery and devotion to duty at Paardeberg he received the Distinguished Service Order. At that period he held the rank of Major. After his return in 1901 he was transferred to the Commonwealth Forces newly formed with the rank of Lieutenant-Colonel. In 1911 he was appointed Principal Medical Officer of the Second Military District with the rank of Colonel.

In 1901 he was again engrossed in his civilian work and he again won fresh laurels. Hydatid disease had attracted his attention in 1897 and then he became interested in bone work. Year after year some new contribution from his pen appeared and on each occasion his colleagues listened and read. His teaching was always sound.

In 1914 Fiaschi was among the first to claim the right to serve his adopted country. He was placed in command of the number three Australian General Hospital at Lemnos. His unflinching attitude to service in time of war seemed to some too stern and unyielding. But his discipline affected himself first of all and was always maintained for the benefit of the country and from a deep sense of duty. He worked very hard and achieved remarkable success. Later he was invalided to England and still later he was about to be returned to Australia when he learned that there was a great shortage of competent surgeons in the Italian army. He offered his services which were accepted. He then resigned his commission in the Australian Imperial Forces and was placed in charge of a military hospital in the Trentino. He worked harder than ever, often in dangerous places and always at great personal sacrifice. After about a year of this service he was ill with a somewhat obscure affection. It proved later to be beriberi. On his return to Australia his friends were alarmed at his appearance. Fortunately his grit and fine physique came to his aid. In a relatively short time he regained his former appearance and a little later he was strong once more.

Thomas Fiaschi was married to an accomplished Irish lady in 1875. They had three sons and two daughters. Of the former two entered the medical profession and one, Dr. Piero Fiaschi, survives him. His wife died in 1911. Some years later he married again. There are two daughters of this union.

Of his interest in viticulture little need be said in this place. He was no amateur in this craft, but a well informed student, who had mastered all the technical details of the wine industry. Few men have heard themselves eulogized more often and more spontaneously than Thomas Fiaschi. He was closely associated with the Australasian Trained Nurses' Association for many years and for a considerable period he was president. He was an active member of the Royal Society of New South Wales in former days and a keen supporter of the medical section. At the meetings of the New South Wales Branch of the British Medical Association his stalwart figure was rarely missed, even when he might have claimed leisure in the evening of his life. His immense popularity was deserved; no man has won the affection of those with whom he came in contact with less effort. He will be missed until his last student passes through the same narrow gateway that has recently been opened for Thomas Fiaschi.

At the funeral service Dr. R. Scot Skirving delivered the following address.

In this, my tribute of respect, I speak not so much for myself, but chiefly as the mouthpiece of his profession and I address myself to you, the relatives, countrymen and friends of Thomas Fiaschi.

It is at once easy and difficult to speak to you as you would wish me to do of our loved and respected companion who has been taken from us; easy, because one knew him so well and his worth; difficult, because one's judgement of character and conduct is less sure when weighed in the "weighted balance of affection" and so one is led either to say too much or too little.

Fiaschi was no ordinary man. His life proved it.

He came to us all these long years ago —perhaps half a century — young, unknown, of Italian blood and, save for his English mother, a foreigner. Truly a "stranger in a strange land," but one he quickly made his own. For he indeed made good in no common way. He became a true and loyal son of the Empire and a great and useful colonist in this one of its ultimate outposts. He rose to high professional distinction. Few, few indeed among his fellows had so wide and correct a knowledge of medicine as a whole. As a surgeon his fame was great. Learned, bold and enterprising, his keenness which did not fade with years, was an example to us all, while his devotion to his profession and his determination to keep abreast of it were at once the admiration and despair of less strenuous souls. Apart from purely professional competence and renown he was intensely patriotic, both to the land of his birth and to the land of his adoption.

Physical and moral cowardice were alike unknown to him. If duty, that "Stern daughter of the Voice of God," called him, it sufficed, even if health were lost or worldly advantage wrecked. And so he served in the Boer War, the Abyssinian campaign and later in the Great War under our flag and also that of Italy. I saw him daily during some of the dark days of the Boer War and I never looked

at him, even when at times we disagreed, with his soldierly figure, martial spirit and indifference to hardship, without thinking that he would have shone equally well as the leader of a forlorn hope as he did in the practice of his profession at home. I have often said that he was in a way born out of due season—he should have been an Elizabethan—for always there was something about him of that "true romance" of which Kipling sings so sweetly.

When he was ill on the other side of the world during the evil years of the war, I went one day to see him in one of the most depressing hospitals I ever entered. After some talk he asked me my opinion of his prospects and I said I thought he would be well in six months and that he ought not to contemplate further work in the war. He did not like my view and spoke something about "red blood and seeing it through." I laughed and said: "You must have been reading Service's poems." I don't think he knew them, for he asked why I said so, so I repeated a few lines and perhaps I now forget them a little:

Still red blood calls, still rings the valiant fray,
Adventure beacons through the summer gloaming,
And long, and long, and long put off the day,
'Ere I sail homing.

But Fiaschi did not sail homing till many a day later!

His mind was broadened by a fluent mastery of Italian, English and French and a wide acquaintance with the general and professional literature of all three tongues. Few indeed in the medical profession in Australia can have equalled him in culture. I cannot call to mind anyone so accomplished in these ways in all the forty odd years I have known him.

I can truly say he exercised no mean influence on those who counted him a friend—in his profession proper, in military medicine, in the stimulation of a love of literature in his younger brethren and also, let me add, in the pursuit of agriculture and grape-growing.

Above all, he had an unique character and a great personality. He gave us an example of unspotted honour, of right professional conduct and of duty done at all costs in times of national stress. Can I say more?

Surely he was one of those radiant souls who, when his virtues and his faults—for he, happily, did not lack some—are assessed at the last tribunal, will be among those who "are dismissed with honour," his life's work well finished and his duty done.

And to us, his relatives, colleagues and friends who remain behind in this most difficult and troubled world, his example will also continue to spur us on to do our duty as he did his.

It is left to us, indeed, to remember him by his simple ideals of what is right and so perhaps with "many stumbles to do justly, to love mercy and to walk humbly with God" and thereby, perchance, ourselves "to join that choir invisible whose music is the gladness of the world."

Dr. Archie Aspinall writes:

The death of Dr. Thomas Fiaschi removes one of the most striking personalities of the medical profession in Australia. He was a patriot, a soldier and a gentleman. At the time of his death he was Consulting Surgeon to the Sydney Hospital, where he had been a surgeon for many years and had set the highest standard of devotion to duty. With him the care of his hospital patients ever came first—private patients had to wait.

To the resident medical officers his immediate response to a call from the Hospital was an inspiration. Although well on in years, no matter what time of day or night he received an urgent call, his reply was: "Ah! I shall be there in three minutes!" If one apologized for disturbing him so frequently, he would reply: "Doctor, disease knows no holiday!"

When the Clinical School was established at Sydney Hospital he was elected the first President and delivered a memorable inaugural address. After leaving the active staff he was President of the Clinical Society and was most regular in his attendance. His cultured mind, surgical acumen and wide clinical experience added much to the success of the meetings.

Possessed of a keen sense of humour many of his sayings are treasured by those who knew him well. Quick tempered, he readily forgave and never bore a grudge. Much will be recorded of his public work apart from the practice of medicine. His medical colleagues will always remember his handsome face, erect military bearing, fine physique and dignified presence.

RICHARD JOSEPH BULL.

IT is with great regret that we have to announce the sudden death of Dr. R. J. Bull, President of the Victorian Branch of the British Medical Association.

Post-Graduate Work.

POST-GRADUATE COURSE IN BRISBANE

IT is announced that Professor J. C. Windeyer, of the University of Sydney, will deliver the Bancroft Memorial Lecture on August 5, 1927. This lecture has been established by the Queensland Branch of the British Medical Association.

The post-graduate course in medicine will be held in Brisbane from August 1 to August 5, 1927. Full particulars will be published in due course.

University Intelligence.

THE UNIVERSITY OF SYDNEY.

A MEETING OF THE SENATE OF THE UNIVERSITY OF SYDNEY was held on May 2, 1927.

A cheque for £500 was received from the Executors of the estate of the late Mrs. Elizabeth M. Goodlet to be applied to the University Cancer Research Fund. It was resolved to express grateful thanks for this benefaction.

An invitation was received from the University of Toronto, Canada, to nominate a delegate to participate in the centenary celebrations of that University in October next. It was resolved to prepare and forward an address of congratulation and to appoint a suitable delegate to represent the University of Sydney on the occasion, if possible.

The following appointments were approved: Mr. H. R. Archer, M.Sc., as Demonstrator in Physiology, and Dr. P. G. Carter as Lecturer and Demonstrator in Organic Chemistry.

It was resolved that the degree of Doctor of Medicine (M.D.) be conferred, without further examination, upon Professor Raymond Arthur Dart, Dean of the Faculty of Medicine, University of the Witwatersrand, Johannesburg, South Africa, for his thesis entitled "The Brain of the Zeuglodontidæ (Cetacea)." His thesis was suported by a paper entitled "The Genesis of the Cavum Septi Pellucidi." Professor Dart graduated M.B., Ch.M. (Sydney) in 1917 with Second Class Honours.

Correspondence.

SOMEONE signing himself "Anon" has sent us a letter for publication, but has neglected to enclose his name and address. He has enclosed with his letter a bunch of paying slips of the Lindfield Branch of the Commercial Banking Company of Sydney, Limited. He is informed that anonymous letters cannot be published unless the writers send their names and addresses which will be regarded as confidential.

LIST OF MEMBERS.

THE Secretary of the Victorian Branch requests us to announce that crossed swords indicating active service with the Naval or Military Forces during the Great War should have appeared in the list of members of the Branches of the British Medical Association in connexion with the names of the following:

Dr. J. F. Bartley, Rosebud.
Dr. J. G. Desailly, Camperdown.
Dr. J. B. D. Galbraith, Blyth Street, Brunswick.
Dr. W. R. Trembath, Sea Lake.

Dr. J. F. Chambers's name is incorrectly given as J. F. Chalmers.

Dr. F. C. Middleton's name has been omitted from the list. His address is Echuca District Hospital, Echuca, Victoria.

The Honorary Secretary of the New South Wales Branch informs us that Dr. C. R. Wiburd's name has been omitted from the list, owing to the fact that he was still a member of the South Australian Branch on December 31, 1926, and was transferred to the New South Wales Branch in March, 1927. His address is Department of Health, Customs House, Sydney. His name should be distinguished by crossed swords.

Through an accident the name of Dr. M. Fitzgerald, Erskineville, Newtown, New South Wales, was omitted from the list.

Another entry as follows should have been included in the list of members of the New South Wales Branch:

✕ Finlayson, M. R., Railway Department, Central Station, Sydney.

Crossed swords should have been inserted opposite the names of—

Dr. E. S. G. K. Vance, Methoura.
Dr. A. S. Waterhouse, Torrington Road, Strathfield.
Dr. C. H. Wesley, 443, Darling Street, Balmain.

Our attention has been drawn to an error on our part in the printing of the lists. The line "Corner, E. V., Binnaway," has not been removed from the New South Wales list. The corrected line is below the one containing the error.

Medical Appointments.

The Health Committee of the League of Nations has recently conferred on Dr. J. H. L. Cumpston, the Director-General of Health of the Commonwealth, a very rare distinction. He has been appointed Assessor of the Health Committee. This distinction has hitherto been conferred on but three previous occasions and is regarded as a very special compliment. The Assessors of the Health Committee of the League of Nations act as special advisers on all matters connected with the health of the nations comprising the League. Australia and Dr. Cumpston are to be congratulated on this important appointment.

* * * *

Dr. James Edward Fancourt McDonald (B.M.A.) has been appointed Assistant Medical Superintendent, Hospital for the Insane, Toowoomba, Queensland.

* * * *

Dr. Wilfrid Arthur Brady (B.M.A.) has been appointed Second Assistant Medical Superintendent, Hospital for the Insane, Goodna, Queensland.

* * * *

Dr. John Coffey (B.M.A.) has been appointed Deputy Commissioner of Public Health, Queensland.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xx.

ROYAL AUSTRALIAN NAVY: Surgeon Lieutenant.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester United Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Members accepting appointments as medical officers of country hospitals in Queensland are advised to submit a copy of their agreement to the Council before signing. Brisbane United Friendly Society Institute. Stannary Hills Hospital.
SOUTH AUSTRALIAN: Secretary, 207, North Terrace, Adelaide.	All Contract Practice Appointments in South Australia. Booleroo Centre Medical Club.
WESTERN AUSTRALIAN: Honorary Secretary, 65, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia. Yarloop Hospital Fund.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Medical practitioners are requested not to apply for appointments to positions at the Hobart General Hospital, Tasmania, without at first having communicated with the Editor of THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales.

Diary for the Month.

MAY 16.—New South Wales Branch, B.M.A.: Organization and Science Committee.
MAY 17.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
MAY 17.—Tasmanian Branch, B.M.A.: Council.
MAY 18.—Western Australian Branch, B.M.A.: Branch.
MAY 24.—New South Wales Branch, B.M.A.: Medical Politics Committee.
MAY 25.—Victorian Branch, B.M.A.: Council.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to "The Editor," THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, Sydney. (Telephones: MW 2651-2.)

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